**Before the**
**Federal Communications Commission**
**Washington, D.C. 20554**

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| In the Matter of | ) | |
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| Redesignation of the 17.7-19.7 GHz Frequency Band, Blanket Licensing of Satellite Earth Stations in the 17.7-20.2 GHz and 27.5-30.0 GHz Frequency Bands, and the Allocation of Additional **Spectrum** in the 17.3-17.8 GHz and 24.75-25.25 GHz Frequency Bands for Broadcast Satellite-Service Use | ) | IB Docket No. 98-172<br>RM-9005<br>RM-9118 |

# SECOND ORDER ON RECONSIDERATION

**Adopted: November 19,2002** **Released: November 26,2002**

By the Commission:

## I. INTRODUCTION

1. In this Second Order on Reconsideration, we grant in part a Petition for Reconsideration tiled in this proceeding by the Hughes Electronics Corporation (Hughes) and deny in its entirety a Petition for Reconsideration tiled by the Satellite Industry Association (SIA).[1] In response to the ***Hughes Reconsideration Petition,*** **we** alter the 18 GHz band plan to make the fixed-satellite service (FSS) the sole primary spectrum allocation in the 18.3-18.58 GHz band.[2] We take thisaction in recognition of our recent decision to make additional spectrum available to current, co-primary users of the 18.3-18.58 GHz

[1] *See* Hughes Electronics Corp., ***Petitionfor Partial Reconsideration,*** IB Docket No. 98-172, RM-9005, RM-9118 (tiled, Oct. 6, 2000) ***(Hughes Reconsideration*** *Petition), **available ut*** < http://gullfoss2.fcc.gov/prod/ecfs/retrieve.cgi?native or pdf=pdf&id document=6511958976 >; Satellite Industry Association, ***Petition for Reconsideration,*** IB Docket No. 98-172 (filed Jan. 7. 2002) ***(SIA Reconsideration Petition), available at*** <http://gullfoss2.fcc. gov/prod/ecfs/retrieve.cgi?native or pdf=pdf&id document-65129 77790>. The SIA is a national trade association that represents U.S. satellite manufacturers, service providers and launch-service companies. *SIA* ***Reconsideration Petition*** at 1.

[2] For purposes of this proceeding. **we** use the "18 GHz band' to refer *to* those frequencies between 17.7 and 19.7 GHz and the term "Ka-band" to refer generally to those frequencies between approximately 18 and **31** GHz.

band.' We also permit the blanket licensing of geostationary orbiting (GSO) FSS facilities in the 18.3-18.58 GHz and 29.25-29.5 GHz bands and – consistent with the band clearing procedures that we have adopted in other proceedings – we adopt provisions designed to ensure the orderly migration and timely reimbursement of terrestrial fixed service (FS) incumbents in the 18.3-18.58 GHz band. These changes to our rules will help promote the efficient use of spectrum for existing and future users.[4]

## II. BACKGROUND

2. Until recently, many different services shared the 18 GHz band on a co-primary basis.' The services that possessed essentially equal rights to the IS GHz band included the terrestrial FS, the FSS and feeder links for the mobile satellite service (MSS).[6] On June 8, 2000, however, the Commission adopted the *18 GHz Order* which, among other things, concluded that terrestnal FS and ubiquitously deployed FSS earth stations generally could not share the same 18 GHz spectrum.' In the ***18 GHz Order,*** therefore, the Commission separated most terrestnal FS operations from most FSS operations by allocating separate sub-bands to each service; however, the Commission retained co-primary allocations for GSO FSS and FS operations in the 18.3-18.58 GHz band.'

3. Despite constraints on the ability of GSO FSS to offer ubiquitous service in the same spectrum as FS, the Commission retained the co-primary allocation for both services in the 18.3-18.58 GHz band because it found "no other spectrum available" in which terrestrial FS operators might relocate existing links and accommodate reasonable FS expansion; therefore, the Commission reasoned that a co-primary FS allocation in the 18.3-18.58 GHz band represented the most "equitable and balanced approach to meeting the current needs of the various existing and future operations in the 18 GHz band."' The Commission recognized that a co-primary allocation at 18.3-18.58 GHz failed to "provide [the] full 1000 [megahertz] of unshared Ka-band downlink spectrum for GSO FSS operation" that many GSO FSS

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[3] *Amendment of Eligibility Requirements in Part 78 Regarding 12 GHz Cable Television Relay Service,* Report and Order, CS Docket No. 99-250, FCC No. 02-149, 17 FCC Rcd 9930 (2002) *(CARS Eligibility Order), available at* <http://hraunfoss.fcc.gov/edocs_public/attachmatch/FCC-02-149A1.doc>.

[4] We note that United States Government geostationary and non-geostationary satellite systems in the fixed-satellite service are authorized to operate in the 17.8-20.2 GHz band in accordance with footnote US334 in the United States Table of Frequency Allocations and that coordination between non-Government operations, both terrestrial and satellite, and these Government operations will continue to remain in effect. Nothing in this ***Second Order on Reconsideration*** changes the relationship between Government and non-Government systems. ***See Amendment*** of ***Parr 2*** *of the* ***Commission's Rules to Allocate Spectrum for the Fixed-Satellite Service*** *in the 17.8-20.2 GHz Band for Government Use,* Memorandum Opinion and Order, 10 FCC Rcd 9931 (1995).

[5] ***Reallocation of*** *the 17.7-19.7 GHz* ***Frequency Bund, Blanker Licensing of Satellite Earth Stations in the*** *17.7-20.2 GHz* ***and*** *27.5-30.0 GHz* ***Frequency Bunds, and rhe Allocution of Additional Spectrum*** *in the* ***17.3-17.8*** *GHz and 24.75-25.25 GHz* ***Frequency Bands for Broadcast Satellite-Service Use,*** Report and Order, IB Docket No. 98-172, 15 FCC Rcd 13430 (2000) *(18 GHz Order), affd sub nom. Teledesic, LLC v. FCC,* 275 F.3d 75 (D.C. Cir. 2001). Typical terrestrial FS in the 18 GHz band include point-to-point microwave communications, Cable Television Relay Service (CARS), broadcasting auxiliary, and electronic newsgathering (ENG) activities.

[6] *18 GHz Order,* 15 FCC Rcd at 13434-35, ¶¶ 9-10. Until 2000, the 18 GHz band was allocated as follows: the 17.7-18.8 GHz band for GSO FSS and FS co-primary use; the 18.8-19.3 GHz band for NGSO/FSS and FS co-primary use; the 19.3-19.7 GHz band for MSS feeder link and FS co-primary use; and the 19.7-20.2 GHz band for GSO FSS primary use. *18 GHz Order,* 15 FCC Rcd at 13435, ¶ 10.

[7] *18 GHz* ***Order,*** 15 FCC Rcd at 13435-36, ¶ 11

[8] *18 GHz* ***Order,*** 15 FCC Rcd at 13446-47, ¶ 35.

[9] *18 GHz* ***Order,*** 15 FCC Rcd at 13447, ¶ 35.

licensees had requested; however, the Commission speculated that changes to satellite designs and the development of innovative new sharing arrangements might one day make sharing between the GSO FSS and FS feasible."

4. In response to the original *18 GHz Order,* we received petitions for reconsideration from several parties, including Hughes Electronics Corporation (Hughes), a proponent of GSO FSS operations.[11] On November 1,2001, we released a ***First Order on Reconsideration*** in this proceeding that resolved many of the petitioners' concerns.[12] We deferred action, however, on two elements of Hughes' petition: (1) that we reconsider the co-primary allocation for FS in the 18.3-18.58 GHz band; and (2) that we permit blanket licensing of earth stations receiving in certain portions of the 18 GHz band.[13]

5. Shortly after we adopted our *First Order on Reconsideration,* the United States Circuit Court of Appeals for the D.C. Circuit issued an order rejecting a separate challenge to the ***18 GHz Order*** from Teledesic LLC, another FSS licensee in the 18 GHz band.[14] In December 2001, the D.C. Circuit rejected those elements of Teledesic's appeal not rendered moot by our ***First Order on Reconsideration.''*** Concluding that the Commission's ***18 GHz Order*** was entitled to the heightened degree of deference traditionally accorded decisions regarding spectrum management, the D.C. Circuit upheld the relocation policies and procedures adopted in the ***18 GHz Order*** that Teledesic had challenged.[16] The court found that the Commission's spechum management goals and the regulatory means used to implement them in the ***18 GHz Order*** were both permissible and reasonable and that the rules' safeguards against unreasonable bargaining by terrestrial operators during the relocation process were adequate."

***6.*** Since that time, **we** have expanded the eligibility requirements to enable the vast majority of FS operators in the 18.3-18.58 GHz band to access other spectrum. On May 16, 2002, we adopted the ***CARS Eligibility Order,*** which permitted all multichannel video programming distributors (MVPDs) to become eligible for Cable Television Relay Service (CARS) licenses in the 12.7-13.2 GHz and 17.7-18.3 GHz bands." Lifting eligibility restrictions on licenses in the 12.7-13.2 GHz and 17.7-18.3 GHz bands reversed a longstanding Commission policy that had allowed franchised cable systems and wireless cable systems to become CARS licensees, but denied the same opportunity to non-eligible competitors to traditional cable systems, such as private cable operators (PCOs), which are dependent on the 18 GHz band. Although the 12.7-13.2 GHz and 17.7-18.3 GHz bands exhibit somewhat different technical

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[10] *18 GHz Order,* 15 FCC Rcd at **13444,130**

[11] ***Hughes Reconsideration Petition*** at I

[12] ***Reallocarion of the 17.7-19.7 GHz Frequency Band, Blanket Licensing of Satellite Earth Stations in the 17.7-20.2 GHz and 27.5-30.0 GHz Frequency Bands, and the Allocarion of Additional Spectrum in the 17.3-17.8 GHz and 24.75-25.25 GHz Frequency Bands /or Broadcast Satellite-Service Use,*** First Order on Reconsideration, 16 FCC Rcd 19808 (2001) ***(First Order on Reconsideration).*** For a comprehensive procedural history of the 18 GHz proceeding, ***see First Order on Reconsideration***, 16 FCC Rcd at 19810-18, ¶¶ 3-20.

[13] ***See First Order on Reconsideration.*** **16** FCC Rcd at 19816-17, ¶ 15

[14] ***See generally Teledesic.*** 275 F.3d at **75.**

[15] ***Teledesic.*** **275** F.3d at 85.

[16] ***Teledesic,*** **275** F.3d at **84-85**

[17] *Teledesic*, **275** F.3d at **85-87**

[18] ***CARS*** *Eligibility* Order, 17 FCC Rcd at 9930, ¶ 1. For purposes of this proceeding, we use the term **"12 GHz** band" to refer specifically to the frequency spectrum between 12.7-13.2 GHz and the term **"*CARS*** band" **to** refer collectively to those sections of the frequency spectrum between 12.7-13.2 GHz and 17.7-18.3 GHz.

characteristics than the 18.3-18.58 GHz band, MVPD licensees who operate in the 18.3-18.58 GHz band are, following adoption of the ***CARS Eligibility Order,*** generally eligible for licenses in these alternative *CARS* bands.[19]

7. In this Second Order on Reconsideration, we address the two remaining elements of Hughes' reconsideration petition against the ***18 GHz Order:*** the appropriate allocation of the 18.3-18.58 GHz band and the merits of authorizing blanket-licensed GSO FSS earth stations in that spectrum. We also address a petition from the SIA against our ***First Order on Reconsideration.***

## III. DISCUSSION

8. While we do not grant reconsideration merely to re-litigate matters already resolved, we may respond to arguments that raise new issues or facts not previously considered." In this case, recent changes in the frequency spechum available for use by terrestnal FS licensees alter one of the fundamental precepts upon which the Commission based its decision in the ***18 GHz Order*** to retain a co-primary allocation for terrestrial FS in the 18.3-18.58 GHz band. As described more fully below, we grant, in part, Hughes' petition for reconsideration due to changed circumstances. Accordingly, we alter the Table of Frequency Allocations to reflect FSS as the sole primary spectrum allocation in the 18.3-18.58 GHz band, we permit the blanket licensing of GSO **FSS** earth stations in this spectrum and the 29.25-29.5 GHz band, and we apply current relocation and reimbursement procedures to ensure the timely migration of terrestrial FS Incumbents from the 18.3-18.58 GHz band.

### A. Sole Primary FSS Allocation in the 18.3-18.58 GHz Band

9. In its Petition for Partial Reconsideration, Hughes raises two principal objections to the Commission's allocation of the 18.3-18.58 GHz band in the ***18 GHz Band Order.*** First, Hughes contends that granting a co-primary allocation for both GSO FSS and **FS** in the 18.3-18.58 GHz band effectively results in only 720 megahertz of spectrum becoming available for use by ubiquitously deployed GSO **FSS** earth stations, which represents an "unexplained break from previous Commission decisions" that were premised on ensuring the availability of 1000 megahertz of spectrum for ubiquitously deployed *GSO* FSS earth stations.[21] Second, Hughes asserts that the Commission granted insufficient weight to evidence in the record and, as a result, improperly balanced the equities between satellite and fixed uses when it established a co-primary allocation for both GSO FSS and FS in the 18.3-18.58 GHz band. Therefore, Hughes urges the Commission to reconsider its actions and designate additional spectrum in the 18 GHz band "as unshared primary spectrum for satellite downlinks to ubiquitous earth terminals."[22] We grant Hughes' petition for reconsideration, albeit on different grounds from those that Hughes pleads.

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[19] Terrestrial FS licenses in the 18.3-18.58 GHz band also are generally eligible to obtain licenses for private operational fixed point-to-point microwave service (OFS) licenses in the *23* GHz band. ***See CARS Eligibility Order,*** 17 FCC Rcd at 9937, ¶ 18. While the opportunities in the 23 GHz were found to be somewhat limited "for transmission of a multitude of video channels," we concluded that the **23** GHz OFS band could continue to offer a viable mechanism "for transmission of a limited number of video channels and transmission of data." ***See CARS Eligibility Order,*** 17 FCC Rcd at 9937, ¶ 18.

[20] *See* 47 C.F.R. § 1.106; ***Reorganization and Revision of Parrs 1, 2, 21 and 94 of the Rules to Establish a New Parr 101 Governing Terrestrial Microwave Fixed Radio Services,*** Memorandum Opinion and Order and Notice of Proposed Rulemaking, 15 FCC Rcd 3129, 3145 & n.97 (denying petitioner's request on grounds that "present[ed] no new data or arguments in support of its position") ***(citing WWIZ, Inc.***, 37 FCC 685, 686 (1964), ***affd sub nom. . Lorain Journal*** Co. ***v FCC,*** 351 F.2d 824 (D.C. Cir. 1965)); ***see also*** 47 **C.F.R.** § 1.429(c).

[21] ***Hughes Reconsideration Petition*** at 6

[22] ***Hughes Reconsideration Petition*** at 6

10. As a preliminary matter, we disagree with Hughes' contention that the decision to allocate less than a full 1000 megahertz for GSO FSS use in the 18 GHz band somehow was unexplained in the *18 GHz Order."* On the contrary, the *18 GHz Order* explained that, while a co-primary allocation for both GSO FSS and FS would still permit gateway-type satellite facilities in the 18.3-18.58 GHz band,[24] an exclusive primary designation for GSO FSS in the 18.3-18.58 GHz band at that time would have not only inhibited competition in the MVPD market by precluding reasonable expansion of MVPD systems that compete with traditional coaxial cable operators? but also threatened to impose unnecessarily high burdens on GSO FSS operators and to delay the deployment of advanced services in this band due to the perceived need to relocate tens of thousands of FS links." Similarly, we do not find persuasive Hughes' argument that the Commission's *18 GHz Order* must be arbitrary because it left a larger percentage of satellite needs unmet than terrestnal needs." Reasoned decision-making does not require splitting the difference where the amount of spectrum available is insufficient to meet the needs of all parties, particularly where, as here, the Commission found that any additional GSO FSS allocation would have adversely affected competition in the MVPD market and imposed unworkable relocation as a condition of GSO FSS operation in the band.[28] In light of the record available to the Commission at the time, therefore, we find that the Commission's analysis offered sufficient explanation of its attempt to balance the competing demands for 18 GHz spectrum between satellite and terrestrial uses.

11. Despite our finding that the Commission's *18 GHz Order* reached an appropriate compromise among competing service models at the time, we find that changed circumstances now warrant a different balance of equities between satellite and terrestrial uses of the band; therefore, we grant that portion of Hughes' petition for reconsideration that seeks sole primary spectrum for GSO FSS use in the 18.3-18.58 GHz band.

12. We are now in a position to be able to agree with Hughes' assertion that the demand for advanced satellite broadband offerings supports exclusively allocating a full 1000 megahertz for GSO FSS in the 18 GHz band. The benefits of allocating matched bands of 1000 megahertz each for GSO FSS downlinks and uplinks in the Ka-band – including enhanced delivery of ubiquitous broadband satellite service – are well documented and need not be repeated at length here." Indeed, until the Commission's

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[23] *Hughes Reconsideration Petition* at 6.

[24] *18 GHz Order*, 10 FCC Rcd at 13447-46, ¶ 36.

[25] *18 GHz Order*, 15 FCC Rcd at 13447, ¶ 35

[26] *18 GHz Order*, 15 FCC Rcd at 13447-46, ¶ 36.

[27] *Hughes Reconsideration Petition* at 10.

[28] *18 GHz Order*, 15 FCC Rcd at 13447-46, ¶ 36; *see also FCC v. WNCN Listeners Guild*, 450 U.S. 582, 594-95 (1981) ("[T]he Commission's decisions must sometimes rest on judgment and prediction rather than pure factual determinations. In such cases complete factual support for the Commission's ultimate conclusions is not required since 'a forecast of the direction in which future public interest lies necessarily involves deductions based on the expert knowledge of the agency.'") (citation omitted). We also note that Hughes' demand for equitable percentages of unmet spectrum needs among competing services might, if credited, add to the already considerable incentive for parties to overstate their spectrum needs to ensure a larger spectrum allocation for their particular service.

[29] *See, e.g., Rulemaking to Amend Parts 1, 2, 21, and 25 of the Commission's Rules to Redesignate the 27.5-29.5 GHz Frequency Band, to Reallocate the 29.5-30.0 GHz Frequency Band, to Establish Rules and Policies for Local Multipoint Distribution Service and for Fixed Satellite Services*, Report and Order, 11 FCC Rcd 19005, 19029, ¶ 58 (1996) (recounting comments from multiple parties indicating that 1000 megahertz of 28 GHz spectrum represents the "minimum amount of spectrum needed to operate commercially viable GSO FSS system" and allocating 1000 megahertz of spectrum in the 28 GHz band for this purpose with different portions of the available bandwidth subject to certain constraints) *(28 GHz Order).*

analysis in the *18 GHz Order* found no reasonable alternative for accommodating private wireless cable operators in any other band except the 18.3-18.58 GHz band, Hughes rightly observes that the Commission had rejected band plans that made less than a 1000 megahertz allocation of exclusive primary spectrum to GSO FSS use because it found that these plans would have resulted "in a significant loss of system capacity and revenue" for GSO FSS systems.[30] The problem with allocating the 18.3-18.58 GHz band exclusively for GSO FSS use was *not* a lack of public interest benefits from granting a full 1000 megahertz of spectrum to GSO FSS at 18 GHz, but rather the excessive *costs* of achieving that 1000 megahertz exclusive allocation through reallocation of the 18.3-18.58 GHz band – both to MVPDs and to potential GSO FSS users."

**13.** In adopting the *18 GHz Order,* the Commission understood that it had allocated 1000 megahertz of spectrum for GSO FSS uplinks in the 28 GHz band and sought to allocate an equal amount of spectrum for GSO FSS downlinks in the 18 GHz band. After the Commission's analysis failed to identify any alternative arrangement that could either relocate terrestrial FS to another band or identify additional 18 GHz spectrum for exclusive GSO **FSS** use, however, the Commission ultimately allocated 720 megahertz for exclusive primary use by GSO FSS and an additional 280 megahertz for co-primary use by both GSO FSS and FS. As repeatedly stated in the ***18 GHz Order,*** the Commission limited the amount of specmm designated for exclusive, primary use by GSO FSS licensees to 720 megahertz, rather than 1000 megahertz, because the incumbent FS licensees in the 18.3-18.58 GHz band, which use wireless facilities to compete with traditional coaxial cable television providers, had no other spectrum in which to operate.[32] Accordingly, the Commission concluded that "ensuring the continued viability of the competitive multichannel video systems in this portion of the spectrum necessitates providing for shared [co-primary] use of the spectrum [from 18.3 GHz] up to 18.58 GHz."[33]

14. In the ***CARS Eligibility Order,*** however, we enhanced the eligibility of MVPDs to access the 12.7-13.2 GHz and 17.7-18.3 GHz bands.[34] We concluded that "all MVPDs, whatever their primary means of program distnbution or system architecture and regardless of whether they hold a local franchise, should be eligible to hold CARS licenses upon a demonstrated need for such spectrum and absent a finding of adverse consequences to currently eligible users of CARS."[35] Greater and more equitable access to spectrum in both the 12 GHz band and other portions of the 18 GHz band has opened

[30] ***See.*** *e.g.,* ***28 GHz Order,*** 11 FCC Rcd at 19021, ¶ 38.

[31] ***See.*** *e.g.,* ***18 GHz Order,*** 15 FCC Rcd at 13446,135 ("We conclude the proposal [for a sole primary GSO FSS allocation in 18.3-18.58 GHz band] would place in jeopardy the viability **of** the extremely large number of fixed stations, CARS, wireless PCOs and other links.") (citation omitted); ***id,*** ("We also conclude that GSO FSS licensees **would** have a difficult time implementing ubiquitous earth stations in this segment due to the **large** number of **terrestrial** ***fixed*** services operating ***in*** *this* band.") (citation *omitted).*

[32] ***See.*** *e.g., 18 GHz* ***Order.*** 15 FCC Rcd at 13447, ¶ 35 ("there is currently no other spectrum available" for FS system licensed to operate in the 18.3-18.55 GHz band); ***id.*** ("GE Americom . . . **fails** to recognize that there is no other spectrum available" for private cable operators).

[33] *18 GHz* ***Order,*** 15 FCC Rcd at 13450, ¶ 40. While 18 GHz terrestrial FS licensees that are not PCOs can be relocated to wireline facilities or other alternative media upon displacement from the 18.3-18.58 GHz band, ***see.*** *e.g., First* ***Order on Reconsideration,*** 16 FCC Rcd at 19834-35, ¶ 61; **see** ***also*** 47 C.F.R. § 101.91(b), the Commission's *18 GHz* ***Order*** did not directly address these alternative media and instead focused on what, if any, ***wireless*** facilities might be available for the relocation of existing and planned terrestrial FS operations in the 18 GHz band. ***See*** *generally 18 GHz* ***Order,*** 15 FCC Rcd at 13446-47, ¶¶ 35-36.

[34] ***CARS*** *Eligibility* ***Order,*** 17 FCC Rcd at 9942, ¶ 31. Prior to our adoption of the ***CARS Eligibility Order,*** MVPDs could not carry video in the 17.7-18.142 GHz band.

[35] ***CARS*** *Eligibility* ***Order,*** 17 FCC Rcd at 9934, ¶ 10.

new opportunities for MVPD licensees currently in the 18.3-18.58 GHz band not available at the time the Commission adopted the *18 GHz Order*.[36] Following adoption of the ***CARS Eligibility Order,*** therefore, the condition that prevented the Commission from identifying a full 1000 megahertz for GSO **FSS** downlinks – the lack of alternative spectrum for terrestrial FS operations in the 18.3-18.58 GHz band – no longer exists. The survival of the private wireless cable industry no longer depends exclusively upon the preservation of a co-primary FS allocation in the 18.3-18.58 GHz band. While we reached our decision to expand eligibility in the CARS bands independent of pending allocation proceedings, our ***CARS Eligibility Order*** stated that this proceeding represented the proper proceeding to resolve issues pertaining to the appropriate allocation of the 18.3-18.58 GHz band, including the reimbursement of relocation expenses for incumbent licenses.[11]

15. In the *18 GHz* **Order,** the Commission did not quantify the number or distribution of terrestnal FS facilities licensed in the 18.3-18.58 GHz band, but suggested there was an "extremely large" number of a FS stations operating in the band.[38] In the Commission's *18 GHz* ***Order,*** the burden of relocating this number of terrestnal FS stations – measured by the number of channels of the already deployed FS facilities – was viewed as potentially rendering the band "unattractive" for GSO **FSS** licensees.[39]

**16.** We have reexamined both the number and the national distribution of terrestrial **FS** licensees in the 18.3-18.58 GHz band to determine the feasibility of relocating the incumbent **FS** licensees from that portion of the 18 GHz band.[40] Our records indicate not only that incumbent PCO licensees operate fewer actual facilities than suggested by the examination of the number of channels that was undertaken in the ***18 GHz Order,*** but also that incumbent PCO licensees operate with greater geographic concentration than was originally envisioned.[41] The records **of** licensed PCO facilities in the 18.3-18.58 GHz band indicate that they are concentrated in relatively few geographic areas. Indeed, the Commission has authorized only approximately 500 facilities to operate in the 18.3-18.58 GHz band throughout the United States, and – as indicated in Figure 1 below – a large majority of those operations are located in metropolitan areas.[42]

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[16] ***CARS Eligibility Order,*** 17 FCC Rcd at **9942, ¶ 31**

[17] ***CARS Eligibility Order,*** 17 FCC Rcd at **9942, ¶ 31** (holding that reallocation and relocation **issues** "would be best addressed in the ***18 GHz Redesignation Proceeding***").

[38] Defining a "link" as a **single** point-to-point or point-to-multipoint channel, the Commission identified approximately **170,000** fixed **"links"** in the **18.14-18.58 GHz** band. *18 GHz Order,* 15 FCC Rcd at **13446, ¶ 34 & n.68.** A subsequent analysis that reflects more recent usage and licensing data indicates that nationwide there are at most **104,000** "links" in the **18.14-18.58** GHz band. Moreover, fewer than **200** licensees transmit over fewer than 2100 paths in this band.

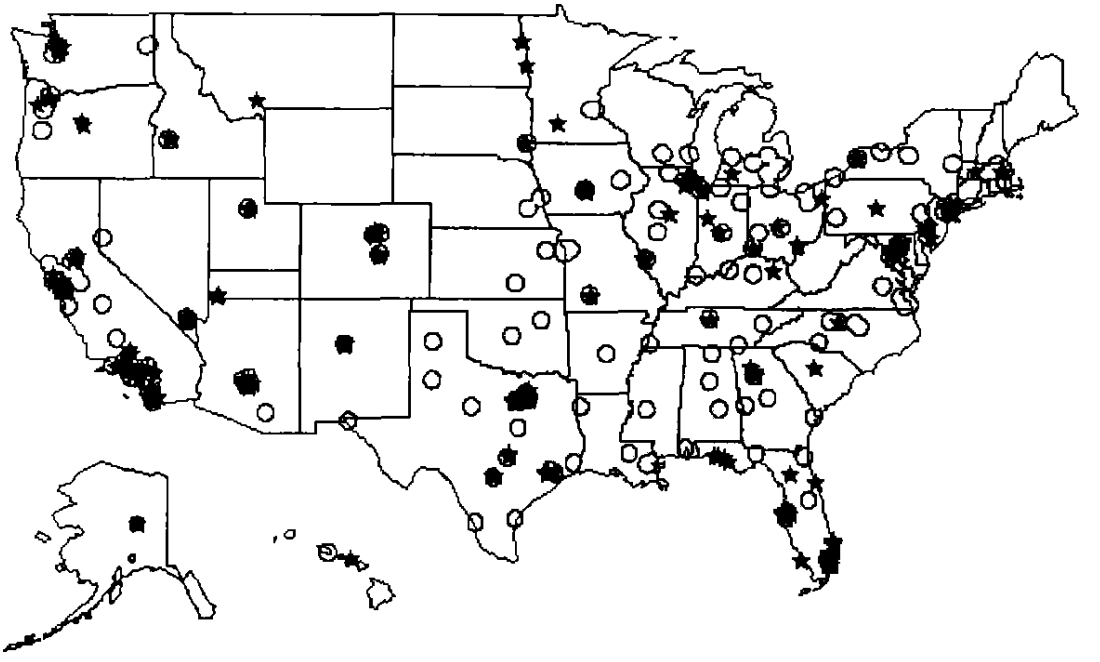
[39] ***18 GHz Order,*** 15 FCC Rcd at **13448,136.**

[40] While we are effecting the relocation only of FS operations in the 18.3-18.58 GHz band, such facilities generally integrate channels down to **18.14** GHz.

[41] The channeling plan for the 18.3-18.58 GHz band provides for channels of six megahertz each: therefore, a single PCO facility could theoretically place up to **46** channels across the **18.3-18.58** GHz band. Defining a "link" as one point-to-point channel or one point-to-multipoint channel, as was done in the ***18 GHz Order,*** may have presented a misleading estimate of the actual number of *facilities* located in the **18.3-18.58** GHz band.

[42] We surveyed major cities to better understand the number **of** licensed point-to-point and point-to-multipoint system. In the thirty-two cities surveyed, less than 1500 "paths" existed within point-to-multipoint and point-to-point systems that would need to be accommodated. For paths within point-to-multipoint system, up to **72** channels may be integrated across the entire **18.142** to 18.58 GHz band that is authorized for point-to-multipoint operation.

**Figure 1:** Existing **Part 101** PCO Licensees in **the 18.3-18.58** GHz Band



Circles represent a twenty-five mile radius around cities with a population greater than 100, 000 based on 1990 United States Census data Stars represent Part 101 PCO licenses

**17.** In addition IO reexamining the number and distribution of PCO systems using the 18.3-18.58 GHz band. we have reviewed the potential for relocating the actual incumbent licensees in this band to other spectrum in light of the availability of additional spectrum – including the **12.7-13.2** GHz and **17.7-18.3** GHz bands. **We** have considered **the** level of congestion and the frequency paths of existing systems in this potential relocation spectrum, including **the** paths of incumbent point-to-multipoint PCOs already located in the **12.7-13.2**GHz and **17.7-18.3** GHz bands. While the point-to-multipoint PCOs tend to configure their stations in a hub-and-spoke pattern, each of the "spokes" that comprise a PCO's system can experience interference from only a discrete range angles. If the PCO systems were relocated to the **12.7-13.2**GHz and **17.7-18.3**GHz frequency bands, the geographic separation of the incumbent systems and the relocated PCO would produce relatively few instances where the frequency paths would intersect in *a way* that would require site shielding *or* other mitigation measures necessary to prevent mutually unacceptable interference. Because it appears that sufficient capacity exists in this relocation spectrum to reasonably accommodate most incumbent licensees, we now believe that any impact on PCO licensees, other incumbent FS licensees and the new GSO FSS entrants will be modest.

**18.** We have no illusion that relocation of incumbent **FS** facilities from the **18.3-18.58** GHz

band will be easy to accomplish.[43] On further examination, however, we now recognize that the number and geographic concentration of terrestrial FS operations permit GSO FSS licensees to operate across large portions of the country without the immediate need to relocate incumbent FS licensees. The limited **FS** deployment in rural areas is particularly important in view of the emphasis that Hughes places on the ability of its proposed satellite system to serve rural areas. Moreover, we conclude that the actual number and concentration of incumbent FS licensees – combined with the enhanced ability of MVPDs to access spectrum in the 12.7-13.2 and 17.7-18.3 GHz bands – will make relocation more feasible than we had originally anticipated. Finally, while the relocation picture for FS operators looks more sanguine than originally envisioned, decisions about the attractiveness of complying with the incumbent-relocation procedures adopted for any particular band are best left to the new entrants to the hand: the Ka-band GSO FSS licensees. If relocation is truly too expensive to undertake, the GSO FSS licensees will not pay to relocate the incumbent FS licensees and must instead operate within the constraints created by the interference environment that the incumbent **FS** licensees establish for a period of ten years.[44] In addition, ten years should be a sufficient amount of time for incumbent FS licensees to determine whether they want to relocate or coexist on a non-interfering basis with primary FSS licensees.

19. In light of the increased eligibility of **MVPDs** to apply for licenses in, or be relocated to, other spectrum in the *CARS* bands at 12.7-13.2 GHz and at 17.7-18.3 GHz and upon a more detailed review of the number and concentration of incumbent FS operators in the 18.3-18.58 GHz band, we believe granting an exclusive 1000 megahertz allocation to GSO FSS will still provide for an opportunity for PCOs to remain competitive in the MVPD market.[45] This action, together with prior decisions allocating 720 megahertz of spectrum for GSO FSS downlinks, creates a total of 1000 megahertz of unshared downlink spectrum for the GSO FSS. The 1000 megahertz of exclusively allocated GSO FSS downlink spectrum brings the GSO **FSS** downlink band into parity with the 1000 megahertz of uplink spectrum in the 28 GHz band plan already allocated for this service and, consistent with our prior findings, provides a reasonable opportunity for GSO FSS licensees to operate the type of satellite service proposed.[46]

**B.** Blanket Earth **Station** Licensing

20. Where an operator intends to deploy a large number of transmit-receive earth stations across a widely dispersed geographic area, the coordination and licensing of individual earth stations,

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[43] The 12.7-13.2 GHz band, for example, currently supports four radio services, including *CARS*, which is the most active user of the band. ***See Amendment of Parts 2 and 25 of the Commission's Rules to Permit Operation of NGSO FSS Systems Co-Frequency with GSO and Terrestrial Systems in the Ku-Band Frequency Range,*** Memorandum Opinion and Order and Second Report and Order, 17 FCC Rcd 9614, 9633-34, ¶ 52 (2002) ***(MVDDS Order).***

[44] ***See*** 47 C.F.R. § 101.85(b).

[45] In addition to the **CARS** bands at 12.7-13.2 GHz and at 17.7-18.3 GHz, incumbent FS licensees in the 18.3-18.58 GHz band not only remain eligible to obtain OFS licenses in the 23 GHz band ***see CARS Eligibility Order,*** 17 FCC Rcd at 9937, ¶ 18, but also continue to have recourse to a host of alternative media that **may** constitute "comparable facilities" under our rules, including fiber optic cable, or satellite facilities. ***See, e.g., First Order on Reconsideration,*** 16 **FCC** Rcd at 19834, ¶ 61 (holding that our comparable facilities policy permits relocation of wireless incumbents to "whatever comparable facilities are available, including alternative media," such as fiber optic cable).

[46] Specifically, the 29.25-29.50 GHz band is available for shared use by the GSO FSS under the Commission's rules for ubiquitous GSO FSS earth terminals. ***See Rulemaking To Amend Parts 1, 2, 21, and 25 of the Commission's Rules to Redesignate the 27.5-29.5 GHz Frequency Band, to Reallocate the 29.5-30.0 GHz Frequency Band, to Establish Rules and Policies for Local Multipoint Distribution Service and for Fixed Satellite Services,*** Third Report and Order, 12 FCC Rcd 22310, 22326-27, ¶ 41 (1997).

with its attendant costs and administrative delays, may impede or even prevent system deployment.[47] In such cases, permitting the blanket licensing of earth stations offers significant public interest benefits." Blanket licensing not only enables accelerated deployment of service to the public by swiftly licensing a large number of terminals, but also allows the Commission to maintain control and exercise oversight of the spectrum as required by Section 301 of the Communications Act.[49]

### 1. Blanket Licensing in the 18.3-18.58 GHz Band

21. In the *18 GHz Order,* the Commission adopted a blanket licensing procedure for GSO FSS earth stations in the unshared portions of the Ka-band.[50] Under the procedures adopted in the *18 GHz Order* and subsequently affirmed in the *First Order on Reconsideration,* a *GSO* FSS licensee could apply for a blanket earth authorization that would permit the licensee to construct and operate a specified number and type of qualified earth stations." The license term for the blanket authorization coincides with the underlying space station license.[52] Moreover, in recognition of a consensus among participants in an industry working group on Ka-band blanket licensing, the Commission adopted specific technical conditions for uplink and downlink operations, which obviates the need for coordination among non-Government systems operating in the Ka-band.[53]

22. The Commission, however, declined to adopt the same type of blanket-licensing procedure in the 18.3-18.58 GHz band that it adopted for the other 720 megahertz of the GSO FSS bands because, as with other shared bands in the 18 GHz range, the Commission concluded that the blanket licensing of ubiquitous GSO FSS earth stations was inconsistent with a co-primary terrestrial FS allocation.[54] Having now established GSO FSS as the sole primary allocation in the 18.3-18.58 GHz

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[47] *See 18 GHz Notice,* 13 FCC Rcd at 19943, ¶ 43 (noting that "the future deployment of satellite earth stations may be hindered if individual coordination were required for each earth station facility and tentatively concluding that individual coordination would "add to the cost and time to implement satellite services and will adversely affect the ability of the public to receive these new satellite services . . ."); *see also id.* at 19954, ¶ 67 (tentatively concluding that blanket licensing in the GSO FSS and NGSO FSS bands serves the public interest because blanket licensing would "eliminate delay and undue administrative burden").

[48] *See 18 GHz Notice,* 13 FCC Rcd at 19943-44, ¶ 43; *see also Establishment of Policies and Service Rules for Non-Geostationary Satellite Orbit, Fixed Satellite Service in Ku-Band,* Notice of Proposed Rulemaking, 16 FCC Rcd. 9680. 9693,146 (2001) (recognizing that "blanket licensing may also be the most practical and efficient regulation in this service" and proposing "to adopt blanket licensing of earth stations in the Ku-Band NGSO FSS, for operations in these specific frequency bands").

[49] *See* 47 U.S.C. § 301 ("It is the purpose of this Act, among other things, to maintain the control of the United States over all the channels of radio transmission; and to provide for the use of such channels, but not the ownership thereof, by persons for limited period of time, under licenses granted by Federal authority . . ."); *see also Inquiry Concerning the Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable and Timely Fashion, and Possible Steps to Accelerate Such Deployment Pursuant to Section 706 of the Telecommunications Act of 1996,* Second Report, 15 FCC Rcd 20913, 21011, ¶ 267 (2000) (noting that blanket licensing of earth stations can "facilitate mass market deployment of the next generation of satellite high-speed service") *(Second Section 706 Report).*

[50] *18 GHz Order,* 15 FCC Rcd at 13471,187

[51] *18 GHz Order,* 15 FCC Rcd at 13471,187

[52] *18 GHz Order.* 15 FCC Rcd at 13471, ¶ 87

[53] *18 GHz Order,* 15 FCC Rcd at 13473,190.

[54] *18 GHz Order,* 15 FCC Rcd at 13474, ¶ 94; *see also, e.g., Reallocation of the 17.7-19.7 GHz Frequency Band, Blanker Licensing of Satellite Earth Stations in the 17.7-20.2 GHz and 27.5-30.0 GHz Frequency Bands, and the*

(continued...)

band, however, we can apply the blanket-licensing provisions adopted in the *18 GHz Order* and affirmed in our *First Order on Reconsideration* to terminals GSO FSS licensees propose to operate in the 18.3-18.58 GHz band. Blanket licensing of earth station facilities in the 18.3-18.58 GHz band remains consistent with the Commission's original intention in the *18 GHz Notice* to permit blanket licensing in all unshared bands.[55] As with the other unshared bands in the 18 GHz range, moreover, we find that permitting blanket licensing of the 18.3-18.58 GHz band may accelerate system deployment and reduce the administrative burden associated with site-by-site licensing mechanisms. Accordingly, we modify Part 25 of our rules to extend these blanket-licensing procedures to the 18.3-18.58 GHz band. As specified in Appendix A, we also adopt transition provisions designed to implement blanket licensing in the band.[56] Finally, due to our decision to permit blanket licensing of GSO FSS earth terminals in the 18.3-18.58 GHz band, we dismiss as moot that portion of Hughes' petition that sought streamlined licensing of earth terminals as a secondary alternative to blanket licensing of facilities in the 18.3-18.58 GHz band."

### 2. Blanket Licensing in the 29.25-29.5 GHz Band

23. In its Petition, Hughes states that the "the 29.25-29.5 GHz band is currently, and was intended to be, available under the Commission's Rules for ubiquitous GSO FSS earth terminals on a shared basis with MSS feeder links."[57] We disagree. In the *18 GHz Order*, blanket licensing of earth stations was not envisioned for the 29.25-29.5 GHz band.[59] As indicated above, blanket licensing is generally not appropriate in shared bands. In this case, GSO FSS operators share the 29.25-29.5 GHz band with MSS feeder links, and uncoordinated and ubiquitous deployment of GSO FSS earth stations could have affected the co-directional use of the frequency band by non-geostationary (NGSO) MSS feeder link systems.

24. NGSO MSS feeder link stations are large satellite earth station complexes that transmit communications traffic between the public switched telephone network and orbiting NGSO MSS satellites.[60] On reconsideration, however, we note that no NGSO MSS feeder link earth stations actually

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(...continued from previous page)
***Allocation of Additional Spectrum** in **the 17.3-17.8 GHz and 24.75-25.25 GHz Frequency Bands for Broadcast Satellife-Service Use,*** Notice of Proposed Rulemaking, 13 FCC Rcd 19923, 19943-44, ¶43 (1998) *(18 GHz Notice)* (announcing a tentative conclusion not to implement blanket licensing of earth station facilities in shared bands in the 18 GHz range on grounds that "[i]f blanket licensing were adopted . . ., then . . . large areas could be closed lo terrestrial fixed service use").

[55] *18 GHz Notice,* 13 FCC Rcd at 19944, 744 (proposing a blanket licensing procedure for GSO FSS earth stations operating in those portions of the Ka-band that the Commission proposed to retain or allocate as unshared by other services, including the 18.3-18.55 GHz band).

[56] ***See, e.g.,*** Appendix A § 101.85(b)(1) (describing the ten-year period during which incumbent FS licensees retain co-primary rights in the 18.3-18.58 GHz band with FSS earth station licensees).

[57] ***See, e.g., Hughes Reconsideration Petition*** at 18.

[58] ***Hughes Reconsideration Petition*** at 1.

[59] *18 GHz* ***Order,*** 15 FCC Rcd ai 13475, 194; ***see also*** *18 GHz* ***Notice,*** 13 FCC Rcd at 19952,763 ("We note that coordination of ubiquitous earth stations with future MSS/FL operations raises questions beyond the GSO/FSS-to-GSO/FSS sharing issues raised in other band segments. Moreover, we recognize the need to maintain access to feeder link spectrum for future mobile satellite systems. For these reasons, we propose not to implement blanket licensing in the 29.25-29.5 GHz band at this time.").

[60] ***See, e.g., Iridium LLC Concerning Use of the 1990-2025/2165-2200 MHz and Associated Frequency Bands for*** a ***Mobile-Satellite System,*** Order and Authorization, 16 FCC Rcd 13778, 13778 ¶ 2 n.4 (2001) ***(Iridium Authorization).***

operate in the 29.25-29.5 GHz hand in the United States today.[61] Given the time, cost and complexity of operating NGSO MSS feeder links,[62] moreover, we do not anticipate that the number of operational NGSO MSS feeder link stations in the 29.25-29.5 GHz hand will materially increase in the future.[63] Therefore, ubiquitously deploying GSO FSS stations in the same band in which NGSO MSS feeder links may eventually operate is unlikely to cause significant problems for present or future NGSO **MSS** feeder link systems, provided that NGSO MSS and GSO FSS operators coordinate. Part 25 of our rules already provides a number of mechanisms to ensure coordination of ubiquitously deployed earth stations with other users.[64] Accordingly, we will permit GSO **FSS** operators to deploy ubiquitous earth stations in the

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[61] The Commission has authorized three NGSO MSS fixed earth stations to transmit in the 29.1-29.25 GHz band, but has not authorized any NGSO MSS stations to transmit in the 29.25-29.5 GHz band. ***See U.S. Leo Services. Inc., for a License to Construct and Operate Transmit-Receive Gateway Fixed Earth Station Facilities for Use with the Iridium System in the 19.4-19.6 GHz and 29.1-29.3 GHz Bands,*** Order and Authorization, DA No. 96-1790, 11 FCC Rcd 13962 (Int'l Bur. 1996) (authorizing the use of the 29.1-29.25 GHz band for transmissions from a site in Tempe, Arizona); ***Iridium US., L.P.***, File No. SES-LIC-19960116-01966, Call Sign E960131, ***available at*** http://dettifoss.fcc.gov/servlet/ib.page.FetchLicense?filing_key=-2099732445 (visited, Oct. 3, 2002) (same); ***Motorola Satellite Communications, Inc., for Licenses to Construct and Operate Transmit-Receive Fixed Earth Station Facilities Near Chandler. Arizona and Sunset Beach. Hawaii for Use as Port of the System-Control Compunent of the Iridium System, Transmitting in the 29.1-29.3 GHz Band.*** Order and Authorization, DA-97-229, **12** FCC Rcd 1456 (Int'l Bur. 1997) (authorizing the use of 29.1-29.25 GHz band for transmissions from a site near Sunset Beach, Hawaii); ***Motorola Satellite Communicurions. Inc.***, File No. SES-LIC-19960412-01429, Call Sign E960272 <http://dettifoss.fcc.gov/servlet/ib.page.FetchLicense?filing_key=-2099744958> (visited, Oct. 3, **2002)** (same); ***General Dynamics Satellite Communications Services, Inc.***, File No. SES-LIC-19971029-01558, Call Sign E980049, ***available at*** <http://dettifoss.fcc.gov/servlet/ib.page.Fetch License?filing_key=-2099822974> (authorizing the use of 29.1-29.25 GHz hand for transmissions from a **site** in Hawaii) (visited, Oct. 3, 2002). NGSO MSS earth station applicant must comply with Sections 25.203(h), 25.203(k) and related provisions of our rules to receive authority to operate in the 29.25-29.5 GHz hand. ***See. e.g.***, 47 C.F.R. § 25.203(h), 25.203(k) (imposing additional technical requirements on NGSO MSS feeder link applicants in the 29.25-29.5 GHz band).

[62] ***See.*** *e.g.*, 47 C.F.R. § 25.250 (restricting the operation of NGSO MSS feeder **links** in the 29.1-29.5 GHz band); 47 C.F.R.§ 25.257 (same); 47 C.F.R. § 101.147(y) (same).

[61] In 2001, Boeing and Iridium received authorizations to configure their 2 GHz NGSO MSS space stations to communicate with Ka-band feeder link earth stations. ***See, e.g., Iridium Authorization***, 16 FCC Rcd at 13782-83, ¶ 11; ***Boeing Company Concerning Use of the 1990-2025/2165-2200 MHz and Associated Frequency Bands for a Mobile-Satellite System,*** Order and Authorization, 16 FCC Rcd 13691, 13695-96 ¶ 10-11 (2001) ***(Boeing Authorization)***. Boeing, however, recentlyapplied to reconfigure its authorized 2 GHz MSS space stations in a manner that, if granted, would render useless any planned NGSO MSS feeder link operations in the Ka-band. ***Application of Boeing Company for Modification of Authority for Use of the 1990-2025/2165-2200 MHz and Associated Frequency Bands for a Mobile-SateNile System,*** File No. SAT-MOD-20020726-00113 (filed, July 17, 2002) (pending); ***Satellite Space Applications Accepted for Filing,*** Public Notice, Report No. SAT-00115 (rel., Aug. 1, 2002), ***available at*** <http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-224926A1.pdf>.

[64] ***See.*** *e.g.*, 47 C.F.R. §§ 25.258(a)-(d) (describing requirements for both NGSO **MSS** and GSO FSS licensees), 25.203(h) (requiring prior coordination and stipulating that "[s]ites and frequencies for GSO and NGSO earth stations, operating in a frequency band where both have a co-primary allocation, shall he selected to avoid earth station antenna mainlobe-to-satellite antenna mainlobe **coupling** . . . *to minimize the possibility* **of harmful** mterference between these services."), 25.203(k) ***("An*** applicant for an earth station that will operate with a geostationary satellite or non-geostationary satellite in a shared frequency band in which the non-geostationary system is (or is proposed **lo** he) licensed for feeder **links,** shall demonstrate in its applications that its proposed earth station will not cause unacceptable interference to any other satellite network that is authorized to operate in the same frequency band ..."); *see* ***also,*** *e.g.*, ***Rulemaking to Amend Parts 1,2,21 and 25 of the Commission's Rules to Redesignate the 27.5-29.5 GHz Frequency Band. to Reallocate the 29.5.30.0GHz Frequency Band,*** Memorandum Opinion **and** Order, 16 FCC Rcd 11436 (2001) (clarifying provisions concerning inter-sysem sharing in the 29.25-29.5 GHz band).

29.25-29.5 GHz band and require them to comply with our Part 25 rules for coordination of these facilities. Specifically, when a GSO FSS operator applies to the Commission to deploy earth stations in the 29.25-29.5 GHz frequency band, we require it to demonstrate how it will coordinate with NGSO MSS feeder link systems under Section 25.258 of our rules.[65] In addition, a GSO FSS operator who seeks blanket licensing of terminals must demonstrate how it will protect other GSO FSS systems under Section 25.138 of our rules.[66] Finally, GSO FSS licensees that deploy ubiquitous earth stations must comply with the annual earth-station reporting requirements contained in Section 25.145 of our rules.[67] We believe that requiring coordination of NGSO MSS feeder links and GSO FSS earth stations consistent with our Part 25 rules will permit nearly ubiquitous deployment of services without compromising the interference protection that other users of the band are entitled to receive. We modify Part 25 of our Rules consistent with this decision.[68]

25. The services currently authorized to use the 29.25-29.5 GHz band are NGSO MSS feeder links and, after the effective date of today's order, blanket licensed GSO FSS earth stations. In addition, Section 101.4 of our rules permits certain FS operations to occur in the 29.25-29.5 GHz band that were authorized under Parts 21 of the Commission's rules prior to 1996.[69] In practice, FS licensees in the band use these authorizations on an infrequent and irregular basis to operate back-up facilities when other forms of wireline services are unavailable or non-existent.[70] The Commission's records indicate that all but one of the thirty FS licensees authorized in the 29.25-29.5 GHz band must operate on a temporary basis of less than six months at a remote point where wire-line communications are not practicable.[71]

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[65] *See* 47 C.F.R. § 25.258(b) ("Licensed GSO FSS systems shall, to the maximum extent possible, operate with frequencyipolarization selections, in the vicinity of operational or planned NGSO MSS feeder link earth station complexes, that will minimize instances of unacceptable interference to the GSO FSS space stations").

[66] See 47 C.F.R. § 25.138.

[67] See 25.145(g)(4) (requiring licensees to "submit to the Commission a yearly report indicating the number of earth stations actually brought into service under its blanket licensing authonty"); *see also 18 GHz Order*, 15 FCC Rcd at 13472, ¶ 89 (adopting requirement that *GSO* FSS licensees "include the number of earth stations actually brought into service in a yearly report to the Commission").

[68] See Appendix A.

[69] *See* 47 C.F.R. § 101.4(a) ("All systems subject to parts 21 and 94 of this chapter in effect as of July 31, 1996 . . . are subject to the requirements under part 21 or part 94 of this chapter as contained in the CFR edition revised as of October 1, 1995 and amended in the Federal Register through July 31, 1996, as applicable, indefinitely."); *Reorganization and Revision of Parts 1, 2, 21, and 94 of the Rules to Establish a New Part 101 Governing Terrestrial Microwave Fired Radio Services,* Report and Order, 11 FCC Rcd 13449, 13477-78, ¶ 81 (1996) (discussing transition plan for incumbent service providers), Of the active fixed licenses in the 29.25-29.5 GHz band listed in our Universal Licensing System (ULS), twenty-four are common carrier point-to-point microwave licenses and four are local television (pick-upirelay) licenses. *See* http://wtbwww05.fcc.gov/cgi-bin/UlsQueryLic/UlsQueryLic.exe? FNC=goto query type Ahome html (Sept. 24, 2002). All but one license permits only temporary fixed operations that do not specify a particular geographic location, may not operate for more than six consecutive months at any one location and do not operate at all times; however, each license requires coordination with other licensed stations prior to operation. *See* 47 C.F.R. § 21.707 (1995).

[70] See 47 C.F.R. § 101.4 (incorporating by reference 47 C.F.R. §§ 21.1-21.961, 94.1-94.165 (1995)).

[71] *See* http://wtbwww05.fcc.gov/default.sph/UlsQueryLic.exe (Sept. 24, 2002); 47 C.F.R. § 21.707(a)(3) (1995) (limiting a temporary fixed station authorized under former Part 21 of our rules to "a remote point where the provision of wire facilities is not practicable"). After coordination and notification to the Commission, legacy Part 21 licensees may deploy more than one temporary fixed station within their authorized area. *See, e.g.*, 47 C.F.R. §§ 21.708(a)-(c) ( 1995) (requiring legacy Part 21 temporary fixed licensees to notify Commission of all temporary fixed service operations in the band by providing the Commission with the exact frequency to be used, the location of the transmitter, the commencement and anticipated termination dates of service, and other pertinent information).

GSO FSS earth stations must take these co-primary FS operations into account when deploying blanket earth stations in the 29.25-29.5 GHz band.[72]

C. Relocation and Reimbursement of Incumbent Operators

26. Under our 18 GHz transition rules that apply to all GSO FSS segments in the 18 GHz range except for the 18.3-18.58 GHz band, FSS licensees may enter into negotiations with co-primary terrestrial fixed services for the purpose of agreeing to terms under which the terrestnal licensees would either relocate or accept a sharing arrangement." If no voluntary agreement is reached within two years for non-public safety incumbents, an FSS licensee may initiate involuntary relocation pursuant to Section 101.91 of our rules.[74] In the *18 GHz Order,* the Commission found that a two-year time period for non-public safety incumbents and a three-year time period for public safety incumbents provided a reasonable balance between the needs of new FSS operators to gain access to spectrum and the needs of existing FS operators to ensure that relocated facilities are provided that meet their needs.[75] In the event that agreement is not reached in any negotiation period, an FSS licensee has the option of invoking involuntary relocation provisions of our rules.[76] Under involuntary relocation, a terrestrial fixed station must be relocated provided that the FSS licensee guarantees payment of relocation costs,[77] completes all activities necessary for implementing the replacement facilities," and builds and tests the replacement system for comparability.[79] Terrestrial fixed service operators need not relocate until the alternative facilities are available for a reasonable time – in this case, one year – to make adjustments, determine comparability, and ensure a seamless handoff.[80] Finally, under our rules, GSO FSS operators generally no longer remain responsible for covering relocation costs that terrestrial incumbents incur more than ten

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[72] Due to the limited number of the legacy terrestrial licensees, the temporary nature of their operations, and the large amount of available authorized bandwidth, we anticipate that private arrangements among the GSO FSS operators and the terrestrial licensees in the 29.25-29.5 GHz band can protect terrestrial operations without the need for formal frequency coordination.

[73] *See* 47 C.F.R §§ 101.69, 101.71.

[74] A terrestrial user contacted by a satellite user may not refuse to negotiate and all patties are required to negotiate in good faith. 47 C.F.R § 101.89(b). In deciding whether the patties have negotiated in good faith, the Commission considers factors including whether the satellite operator has made a *bona fide* offer of relocation and whether, if the terrestrial user demanded a premium, the premium was proportionate to the cost of providing comparable facilities. *Id.* "Comparable facilities" are defined in terms of "throughput" or capacity, reliability, and operating costs. *Id.* § 101.89(d).

[75] *18 GHz Order,* 15 FCC Rcd at 13469,781.

[76] *18 GHz* Order, 15 FCC Rcd at 13469-70, ¶ 82.

[71] Relocation costs that FSS licensees must pay include: all engineering, equipment, site and FCC fees, and any legitimate and prudent transaction expenses incurred by the terrestrial licensee that are directly attributable to an involuntary relocation (subject to a cap of 2% of the associated "hard costs," which are defined as the "actual costs associated with providing a replacement system"). *18 GHz* Order, 15 FCC Rcd at 13469, ¶ 82 n.165; 47 C.F.R. § 101.91(a)(1). FSS licensees are not responsible for transaction costs incurred during the negotiation period or for fees that cannot be tied legitimately to the provision ofcomparable facilities. *18 GHz Order,* 15 FCC Rcd at 13469, ¶ 82 n.165; 47 C.F.R. § 101.91(a)(1).

[78] These include all engineering and cost analyses of the relocation procedure and, identifying and obtaining, on the incumbent's behalf, new microwave frequencies and frequency coordination. *See* 47 C.F.R. § 101.75(a)(2).

[79] Replacement system for involuntarily relocated facilities must be at least equivalent to the existing facility with respect to throughput, reliability, and operating costs. See 47 C.F.R. § 101.89(d).

[80] *18 GHz* Order. 15 FCC Rcd at 13469,¶ 82; First Order *on* Reconsideration, 16 FCC Rcd at 19838, ¶ 70.

years from the adoption date of the *18 GHz* Order." In the *18 GHz* Order, the Commission described these relocation procedures as a proven "system that should lead to efficient relocation and ultimately to the band segmentation that we conclude serves the public interest" and added that these rules should "provide reasonable flexibility *to* FSS licensees to establish their operations in a timely and economic manner."[82]

27. Having now established GSO **FSS** as the sole primary allocation in the 18.3-18.58 GHz band, we apply the relocation provisions adopted in the *18 GHz* Order and subsequently affirmed in both the *First* Order *on* Reconsideration and the D.C. Circuit's Teledesic decision to terminals GSO FSS licensees propose to operate in the 18.3-18.58 GHz band." We permit terrestrial **FS** licensees currently operating in the 18.3-18.58 GHz band to continue to operate existing facilities, subject to the right of a CSO FSS operator to relocate the **FS** facility to a different frequency within the radio spectrum or another comparable facility.[84] **A** relocated terrestnal **FS** licensee is entitled to compensation for expenses related to relocation from the new GSO FSS entrant for a period of ten years from the adoption date of this Order. We hereby extend our existing 18 GHz transition procedures to the 18.3-18.58 GHz band and modify our rules accordingly. We also take this opportunity to correct a typographical error repeated in some of our rules that caused the rules to depart from the Commission's *18 GHz Order*.[85]

**D.** Other Issues

28. We deny the *SIA* Reconsideration Petition against the First Order *on* Reconsideralion in this proceeding." SIA argues that the Commission's First Order *on* Reconsideration emphasized the speed of relocation over other policies that inform our relocation procedures, such as a previously announced intention to provide for the growth and development of both the satellite and terrestrial services.[87] SIA next contends that this perceived shift in emphasis toward speedy relocation of incumbents from the I8 GHz band is not served by the "comparable facilities policy," which, according to SLA, permits incumbents "an absolute right to have their aging equipment replaced with brand new equipment if it cannot be retuned and a right "to hold out for 'premiums' over and above the cost of replacement facilities."[88] SLA claims that the Commission has dismissed proposals that would have cleared the band more quickly and at lower expense to the GSO **FSS** licensees in the band.

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[81] *18 GHz* Order, **15** FCC Rcd at 13470,182

[82] 18*GHz* Order, 15 FCC Rcd at 13470, ¶ 82.

[83] For a discussion of the Teledesic decision, see *infra* ¶¶ 30–31

[84] We note that, while our comparable facilities policy seeks to be technology neutral and permits the new entrant to provide any comparable facility *to* the displaced incumbent, our policies do not require the displaced incumbent to accept a material change in its regulatory classification, such as a change in regulatory classification from **a** PCO to a cable operator, as a result of the relocation.

[85] ***See*** infra Appendix **A. As** modified, Sections 21.901(e), 74.502(c), 74.602(g), 78.18(a)(4), and 101.147(r)(viii) implement the precise holding of the 18 *GHz* Order by providing that no applications for new licenses will be accepted for filing in the 18.58-18.82 and 18.92-19.16 GHz bands. Compare ***18 GHz*** Order, **15 FCC** Rcd at 13462, ¶¶ 65-66 (providing that no new applications for licenses will be accepted in the relevant bands after the Order's adoption), with 47 C.F.R. §§ 21.901(e)(2), 74.502(c)(2), 74.602(g), 78.18(a)(4), 74.502(c)(2) and 101.147(r)(viii)(2002) (providing that no new licenses will be granted in the relevant bands after the Order's adoption).

[86] *SIA* Reconsideration Petition at 1

[87] *SIA* Reconsiderarion Petition at 3

[88] *SIA* Reconsideration Petition at **3**

29. SIA's challenge to our relocation procedures is without merit. SIA concedes that many goals – not just the rate at which a given band is cleared – continue to inform the Commission's "comparable facilities" policy toward incumbent relocation.[89] Other goals include: (i) ensuring continuous service to those that use the incumbent's facilities;" (ii) preventing interference to the new entrant;" (iii) promoting more efficient use of the spectrum by both the new entrant and the departing incumbent;[92] and (iv) encouraging cooperation among potentially adverse parties by promoting incumbents' voluntary migration from the band.[93] Lndeed, the Commission has on many occasions considered, and rejected, alternatives to our longstanding comparable facilities policy[94] as too divisive, too disruptive, too slow, or too confiscatory in light of our overall spectrum management goals.[95]

30. Principally on these grounds, the D.C. Circuit upheld our relocation policies for the 18 GHz band as reasonable in light of our spectrum policy goals in December, 2001.[96] In ***Teledesic v. FCC,*** the D.C. Circuit rejected Teledesic's contention that the Commission failed to adequately consider alternatives to the comparable facilities policy ultimately adopted for the 18 GHz band.[97] The court

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[89] *See SIA **Reconsiderofion Petition*** at 4 ("Of course, speed is not the only policy goal the Commission has articulated. The Commission has been concerned first and foremost with ensuring that involuntary relocation does not force FS operators to discontinue service.").

[90] *See **Firsf Order on Reconsiderution.*** 16 FCC Rcd at 19841, ¶ 77; see also, *e.g.,* 47 U.S.C. § 151 (charging the Commission with "mak[ing] available, ***so*** far as possible, to all the people **of** the United States . . . a rapid, efficient. Nation-wide, and world-wide wire and radio communication service with adequate facilities at reasonable charges").

[91] ***See.*** *e.g., **18 GHz Order,*** 15 FCC Rcd at 13467, ¶ 76 ("It is a central aspect of our decisions in ***this*** proceeding that stations in the new primary service must be able to establish their operations without significant interference from existing stations of any other service").

[92] **See,** *e.g., **Nrsr Order*** on ***Reconsiderofion,*** 16 FCC Rcd at 19833, ¶ 58 ("We conclude that in the ***18 GHz Order,*** the Commission properly invoked the policy of preventing spectrum warehousing and promoting more efficient use of the spectrum by incumbents and new entrants alike by compensating incumbents only for the spectrum that they are actually using at the time of the relocation") (citing ***18 GHz Order,*** 15 FCC Rcd at 13437, ¶ 14 n.27).

[93] ***See,*** *e.g., **First Order*** on ***Reconsiderarion.*** 16 FCC Rcd at 19840, ¶ 75 ("we find that new entrants benefit from our policy of seeking to ensure that incumbents have every possible reasonable incentive to relocate promptly and voluntarily").

[94] In the ***18 GHz Notice,*** for example, the Commission noted that it had addressed the same question in earlier proceedings and asked commenters to discuss whether the principles adopted in the earlier proceedings should apply to this band. ***18 GHz Notice.*** 13 FCC Rcd at 19942-43, ¶ 41 & nn.65-66 (citing ***Redevelopment of Spectrum to Encourage Innovation in the Use of New Telecommunications Technologies,*** First Report and Order and Third Notice of Proposed Rule Making, 7 FCC Rcd 6886 (1992); Second Report and Order, 8 FCC Rcd 6495 (1993); Third Report and Order and Memorandum Opinion and Order, 8 FCC Rcd 6589 (1993); Memorandum Opinion and Order, 9 FCC Rcd 1943 (1994); Second Memorandum Opinion and Order, 9 FCC Rcd 7797 (1994) ***(Second Emerging Technologies Memorandum Order); Amendment of Section 2.106 of the Commission's Rules to Allocate Spectrum at 2 GHz for Use by the Mobile-Satellite Service.*** First Report and Order and Further Notice of Proposed Rule Making, 12 FCC Rcd 7388,7396-7404,7414-21 (1997)).

[95] *See, e.g., **18 GHz Order,*** 15 FCC Rcd at 13468, ¶ 78 (rejecting a proposal to base relocation expenses on the un-amortized cost of the replaced equipment); ***First Order on Reconsideration,*** 16 FCC Rcd at 19841, ¶ 77 (rejecting a proposal to base relocation expenses on un-amortized costs on grounds **that** "anything **less** will discourage incumbents from relocating").

[96] ***Teledesic, LLC v. FCC,*** 275 F.3d at 78.

[97] ***See.*** *e.g., **Teledesic,*** 275 F.3d at 85 ("Teledesic's contentions fail because the Commission adequately explained both the rationale underlying **its** chosen approach, as well as its reasons for rejecting Teledesic's proposed alternative.")

concluded that, because the 18 GHz band relocation policies were consistent with the Commission's overall approach to accommodating new technologies in occupied spectrum bands, the Commission "was not required to give as extensive a justification as it would have had it unveiled the policy for the first time."[98] The D.C. Circuit held that, where – as here – apatty proposes alternative relocation mechanisms inconsistent with the Commission's well-explained goals, "the Commission was not required to analyze each of those suggestions in detail."[99]

31. **SIA's** challenge to our relocation rules resembles Teledesic's challenge of our rules before the D.C. Circuit. Like Teledesic, SIA challenges the compensation mechanism articulated under our tules governing the comparable facilities policy for incumbent relocation. SIA also claims that the Commission improperly rejected proposals that would have cleared the band more quickly and at lower expense to the GSO FSS licensees in the band. We disagree. We find, as the D.C. Circuit did, that the Commission adequately supported its chosen relocation mechanism for the 18 GHz band and adequately considered alternatives in light of both our overall spectrum management goals and our well-established policies for incumbent relocation. We previously stated, and state again today, that the Commission was not ***changing*** relocation policies in the ***18 GHz Order,*** but rather ***"applying*** an established policy that it has employed in other similar circumstances."[100] Consistent with *Teledesic* and *McLaughlin* and contrary to the contentions of SIA, reasoned decision making does not require us to revisit all possible alternatives in detail when we apply an established regime, such as our comparable facilities policies, to a recurrent problem, such as incumbent band relocation. Thus, we again affirm for reasons previously stated that the Commission's comparable facilities policy for relocation of incumbent spechum users in the 18 GHz band will best serve our multivalent policy goals for incumbent relocation. [101]

32. Separately, SIA also questions whether displaced FS licensees require a one-year testing period upon relocation. SIA states that, while it supports a "testing" approach in principle, one year is too long a time to constitute a reasonable time for displaced FS licensees in most cases.[102] SIA claims that, because new entrants incur most of an incumbents' relocation expenses prior to testing new facilities, a one-year time period for testing would require new entrants to reimburse incumbents' relocation expenses earlier than if the Commission adopted a shorter testing period for the new equipment.[103] Accordingly, SIA claims the one-year testing period would needlessly increase the already "front-loaded" capital requirements of satellite operators.[104] SIA also claims, without elaboration, that the one-year testing period might encourage FS licensees to delay relocation, presumably because displaced FS licensees might use the possibility of returning to the original band to extract additional concessions from the new

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98 ***Teledesic,*** 275 F.3d at 86 ***(citing Hall v. McLaughlin***, 864 F.2d 868, 872 (D.C. Cir. 1989) (holding that where an agency is following established policy, the need for a comprehensive statement of its rationale is less pressing)).

99 ***Teledesic,*** 275 F.3d at 87.

100 ***First Order on Reconsideration,*** 16 FCC Rcd at 19842-43, ¶ 80.

101 We affirmed this conclusion once before. ***See First Order on Reconsideration,*** 16 FCC Rcd at 19840, ¶ 76 (holding that "the relocation rules in the *18 GHz Order* struck the correct balance between the new entrants' immediate need for specmm and the need of the incumbents to cover the costs associated with early move out of the band. . . . by providing a framework that encouraged voluntary negotiations between the parries"). We remind parties that Section 1.106 of our rules provides that a "petition for reconsideration of an order which has been previously denied on reconsideration may be dismissed by the staff as repetitious." See 47 C.F.R. § 1.106(k)(iii).

102 *SIA* ***Reconsideration Petition*** at 7

103 ***SIA Reconsideration Petition*** at 7.

104 *SIA* ***Reconsideration Petition at*** 7.

entrant.[105] T herefore, S IA asserts that a thirty-day testing period is more appropriate than a one-year testing period.[106]

*33.* We disagree. The Commission first adopted the one-year testing policy in 1992.[107] Comprehensively testing comparable facilities requires time and, depending on whether radio-transmission facilities are involved, may require the displaced incumbent to test during different times of the year to account for seasonal variations in signal propagation.'" To ensure that displaced incumbents obtain facilities that "are equivalent in every respect to their original facilities,"[109] we generally have allowed a one-year period for testing in a wide variety of relocation decisions issued since 1992 that have involved both satellite- and ground-based new entrants.[110] In this case, SIA has not provided us with sufficient evidence to depart from our longstanding precedent ofallowing one year for the testing of displaced incumbents' new facilities. We remain unconvinced by SIA's unsupported contention that the one year period might cause excessive payments for, or delays in, the relocation of incumbents' facilities. Our experience to date with the relocations required in certain spectrum allocated to the Personal Communications Service (PCS) has not indicated that a one-year testing period causes excessive payments or delays. We, therefore, decline to depart from our precedent and reaffirm the one-year period for new facilities testing by incumbent FS licensees **who** are displaced from the 18.3-18.58GHz band. To help alleviate SIA's concerns, however, we will carefully review any claims of inequitable payments or

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105 ***SIA Reconsideration Petition*** at 7.

106 *SIA* ***Reconsideration*** *Petition* at *7*

107 ***See Redevelopment*** *of Spectrum* ***to Encourage Innovation in the Use*** *of New* ***Telecommunications*** Technologies, First Report and Order and Third Notice of Proposed Rule Making, 7 FCC Rcd 6886, 6890, ¶ 24 (1992) ("If within one year after the new facilitiesare in operation, they are demonstrated by the [displaced incumbent] to be not comparable to the former facilities, the emerging technology service provider must remedy any deficiencies or pay to relocate the [displaced incumbent] back to the former 2 GHz frequencies.").

108 Seasonal variations **in** precipitation and foliage density affect the propagation of radio waves in this band. At other frequencies, seasonal variations in atmospheric ionization, which result from the varying distance of the sun to certain areas of the earth, can also affect the propagation of radio waves. ***See generally. e.g.,*** Federation of American Scientists, ***Radio Frequency Communication*** *§ 3-*I, ***available at*** < http://www.fas.org/spp/military/docops/afwa/U3.html > (visited June 10, 2002).

109 ***Second Emerging Technologies Memorandum Order,*** 9 FCC Rcd at 7800,122 ("Incumbents will have one year to test their new facilities to ensure that they are equivalent in every respect to their original facilities."); ***see also Redevelopment*** *of Spectrum* ***to Encourage Innovation in the Use*** *of* ***New Telecommunications Technologies,*** **First** Report and Order and Third Notice of Proposed Rule Making, 7 FCC Rcd 6886, 6890, ¶ 24 (1992) (providing **that** "[i]f within one year after the new facilities are in operation, they are demonstrated by the [displaced incumbent] licensee to be not comparable to the former facilities, the [new enbant] must remedy any deficiencies or pay to relocate the [incumbent] licensee back to the former . . . frequencies"); ***see*** also 47 U.S.C. § 923(g)(3)) (providing that, if, with one year after relocarion, a Government entity demonstrates to the Commission that its new facilities are not comparable to the facilities or spectrum from which it was relocated, the new licensee must take reasonable steps to remedy any defects of the new facilities, or must pay the Government entity for costs incurred to relocate back to its original facilities **or** frequencies").

110 ***Creation*** *of Low* ***Power Radio Service,*** 15 FCC Rcd 19208,19234,165 (2000) ("Any interference caused by the LPFM station should be detectable within one year after it commences operation. The one-year cure period is similar to the technical requirement that each FM permittee resolve at its sole expense all blanketing interference complaints for a one-year period beginning with the commencement of program tests."); ***see also.*** *e.g.*, *MVDDS* ***Order,*** 17 FCC Rcd at 9655, ¶ 93 ("If a DBS provider **or** customer of record lodges a complaint regarding service within one year after MVDDS commences operation, the MVDDS licensees must correct interference to that customer or cease operation if it is demonstrated that the customer is receiving harmful interference from the MVDDS system or that the MVDDS signal exceeds the permitted EPFD level at the customer location. ").

unjustifiable delay and we caution all parties against abusing the relocation procedures that we have adopted. Cooperation will best ensure a timely and cost-effective transition for everyone involved.

## IV. CONCLUSION

34. We grant in part and deny in part Hughes' petition forreconsideration. We alter the Table of Frequency Allocations to reflect FSS as **the** sole primary spectrum allocation in the 18.3-18.58 GHz band; we authorize the blanket licensing of GSO FSS earth stations in this spechum and in the 29.25-29.5 GHz band; and we adopt relocation and reimbursement procedures to ensure the hmely migration of terrestnal FS incumbents from the 18.3-18.58 GHz band. We deny SIA's petition for reconsideration. Our relocation policies and our one-year testing window have **been** adequately justified and alternatives adequately explored in light of our overall spechum management goals.

## V. ORDERING **CLAUSES**

35. IT **IS** ORDERED that, pursuant to sections 1, 4(i), 4(j), 301, 302, 303(c), 303(e), 303(f), 303(r) and 403 of the Communications Act of 1934, as amended, 47 U.S.C. sections 151, 154(i), 154(j), 301, 302, 303(c), 303(e), 303(f), 303(r), and 403, this ***Order*** IS ADOPTED.

36. IT IS FURTHER ORDERED that the Petition for Reconsideration of Hughes Electronics Corporation is GRANTED, IN PART, AND DENIED IN PART.

37. IT IS FURTHER ORDERED that the Petition for Reconsideration of the Satellite Industry Association is DENIED.

38. IT IS FURTHER ORDERED that the Regulatory Flexibility Analysis, as required by section 604 of the Regulatory Flexibility Act and as set forth in Appendix B, IS ADOPTED.

39. IT **IS** FURTHER ORDERED that the Commission's Consumer and Governmental Affairs Bureau, Reference Information Center, SHALL SEND a copy of this ***Order,*** including the Final Regulatory Flexibility Analysis to the Chief Counsel for Advocacy of the **Small** Business Administration.

40. IT **IS** FURTHER ORDERED that this proceeding is terminated pursuant to sections 4(i) and 4(j) ofthe Communications Act of 1934, as amended, 47 U.S.C. sections 154(i) and 154(j).

FEDERAL COMMUNICATIONS COMMISSION

Marlene H. Dortch
Secretary

## APPENDIX A: FINAL RULES

For the reasons set forth in the preamble, **parts** 2, 21, 25, 74, 78, and 101 of title 47 of the Code of Federal Regulations are amended as follows.

### PART 2 – FREQUENCY ALLOCATIONS AND RADIO TREATY MATTERS; GENERAL RULES AND REGULATIONS

1. The authority citation for part 2 continues to read as follows:

   AUTHORITY: 47 U.S.C. 154, 302a, 303, and 336, unless otherwise noted.

2. Section 2.106 is amendedas follows:
   (a) Revise page 69.
   (b) In the list of non-Federal Government (NG) footnotes, revise NG144

The additions and revisions read as follows:

**§ 2.106 Table of Frequency Allocations.**

18.3-22.5 GHz (SHF) Paoe 69

| International Table | | | United St | es Table | FCC Rule Part(s) |
|---|---|---|---|---|---|
| Region 1 | Region 2 | Region 3 | ederal Government | Non-Federal Government | |
| See previous page for 18.1-18.4 GHz | | | 3.3-18.6<br>XED-SATELLITE<br>space-lo-Earth) G117<br><br>S334 | 18.3-18.6<br>'IXED-SATELLITE<br>(space-to-Earth) NG164<br><br>JS334 NG144 | Satellite Communications (25) |
| 18.4-18.6<br>FIXED<br>FIXED-SATELLITE (space-to-Earth) 5.484A<br>MOBILE | | | | | |
| 18.6-18.8<br>EARTH EXPLORATIQN-SATELLITE (passive)<br>FIXED<br>FIXED-SATELLITE (space-to-Earth) 5.5226<br>MOBILE except aeronautical mobile<br>Space research (passive)<br><br>5.522A 5.522C | 18.6-18.8<br>EARTH EXPLORATION-SATELLITE (passive)<br>FIXED<br>FIXED-SATELLITE (space-to-Earth) 5.522B<br>MOBILE except aeronautical mobile<br>SPACE RESEARCH (passive)<br><br>5.222A | 18.6-18.8<br>EARTH EXPLORATION-SATELLITE (passive)<br>FIXED<br>FIXED-SATELLITE (space-to-Earth) 5.5226<br>MOBILE except aeronautical mobile<br>Space research (passive)<br><br>5.522A | 3.6-18.8<br>ARTH EXPLORATION.<br>ATELLITE (passive)<br>XED-SATELLITE<br>space-to-Earth) US255<br>5117<br>PACERESEARCH<br>passive)<br><br>S254 US334 | 18.6-18.8<br>EARTH EXPLORATION-SATELLITE (passive)<br>FIXED-SATELLITE<br>(space-to-Earth) US255<br>NG164<br>SPACERESEARCH<br>(passive)<br><br>US254 US334 NG144 | |
| 18.8-19.3<br>FIXED<br>FIXED-SATELLITE (space-to-Earth) 5.523A<br>MOBILE | | | 3.8-20.2<br>IXED-SATELLITE<br>space-to-Earth) G I 17 | 18.8-19.3<br>FIXED-SATELLITE<br>(space-to-Earth) NG165<br><br>US334 NG144 | |
| 19.3-19.7<br>FIXED<br>FIXED-SATELLITE (space-to-Earth) (Earth-space) 5.5238 5.523C 5.523D 5.523E<br>MOBILE | | | | 19.3-19.7<br>FIXED<br>FIXED-SATELLITE (space-to-Earth) NG166<br><br>US334 NG144 | Satellite Communications (25)<br>Auxiliary Broadcast. (74)<br>Cable TV Relay (78)<br>Fixed Microwave (101) |
| 19.7-20.1<br>FIXED-SATELLITE (space-to-Earth) 5.484A<br>Mobile-satellite (space-to-Earth)<br><br>5.524 | 19.7-20.1<br>FIXED-SATELLITE (space-to-Earth) 5.484A<br>MOBILE-SATELLITE (space-to-Earth)<br><br>5.524 5.525 5.526 5.527 5.528 5.529 | 19.7-20.1<br>FIXED-SATELLITE (space-to-Earth) 5.484A<br>Mobile-satellite (space-to-Earth)<br><br>5.524 | | 19.7-20.1<br>FIXED-SATELLITE (space-to-Earth)<br>MOBILE-SATELLITE (space-to-Earth)<br><br>5.525 5.528 5.527 5.528 5.529 US334 | Satellite Communications (25) |

* * * * *

NON-FEDERAL GOVERNMENT (NG) FOOTNOTES

* * * * *

NG144 Stations authorized as of September 9, 1983 to use frequencies in the bands 17.7-18.3 GHz and 19.3-19.7 GHz may, upon proper application, continue operations. Fixed stations authorized in the 18.3-19.3 GHz band that remain co-primary under the provisions of 47 C.F.R. §§ 21.901(e), 74.502(c), 74.602(g), 78.18(a)(4), and 101.147(r) of this chapter may continue operations consistent with the provisions of those sections.

* * * * *

## PART 21 – DOMESTIC PUBLIC FIXED RADIO SERVICES

3. Section 21.901 is amended to read as follows:

§ 21.901 Frequencies.

(e) Frequencies in the band segments 18,580-18,820 MHz and 18,920-19,160 MHz that were licensed or had applications pending before the Commission as of September 18, 1998 may continue those operations for point-to-point return links from a subscriber's location on a shared co-primary basis with other services under parts 25, 74, 78 and 101 of this chapter until June 8, 2010. Prior to June 8, 2010, such stations are subject to relocation by licensees in the fixed-satellite service. Such relocation is subject to the provisions of §§ 101.85 through 101.97 of this chapter. After June 8, 2010, such operations are not entitled to protection from fixed-satellite service operations and must not cause unacceptable interference to fixed-satellite service station operations. No applications for new licenses will be accepted in these bands after June 8, 2000.

* * * * *

## PART 25 – SATELLITE COMMUNICATIONS

4. The authority citation for Part 25 continues to read as follows:

AUTHORITY: 47 U.S.C. 701-744. Interprets or applies sec. 303, 47 U.S.C. 303. 47 U.S.C. sections 154, 301, 302, 303, 307, 309 and 332, unless otherwise noted.

5. Section 25.115 is amended to read as follows:

§ 25.115 Application for earth station authorizations.

* * * * *

(e) *Earth stations operating in the 20/30 GHz Fixed-Satellite Service with U.S.-licensed or non-U.S. licensed satellites:* * * * Earth stations belonging to a network operating in the 18.3-18.8 GHz, 19.7-20.2 GHz, 28.35-28.6 GHz or 29.25-30.0 GHz bands may be licensed on a blanket basis. * * *

6. Section 25.138 is amended to read as follows:

**§ 25.138 Blanket Licensing Provisions of GSO FSS Earth Stations in the 18.3-18.8 GHz (space-to-Earth), 19.7–20.2 GHz (space-to-Earth), 28.35-28.6 GHz (Earth-to-space), and 29.25–30.0 GHz (Earth-to-space) bands.**

(a) **All** applications for a blanket earth station license in the GSO FSS in the 18.3-18.8 GHz, 19.7–20.2 GHz, 28.35-28.6 GHz, and 29.25–30.0 GHz bands that meet the following requirements shall be routinely processed:

* * * * *

7. Section 25.145 is amended to read as follows:

**§ 25.145 Licensing conditions for the Fixed-Satellite Service in the 20/30 GHz bands**

* * * * *

(h) Policy governing the relocation of terrestnal services from the 18.3 to 19.3 GHz band: Frequencies in the 18.3-19.3 GHz band listed in Parts 21, 74, 78, and 101 of this chapter have been reallocated for primary use by the Fixed-Satellite Service, subject to various provisions for the existing terrestrial licenses. Fixed-Satellite Service operations are not entitled to protection from the co-primary operations until after the period during which terrestnal stations remain co-primary has expired. (see §§ 21.901(e), 74.502(c), 74.602(g), 78.18(a)(4), and 101.147(r)).

* * * * *

8. Section 25.202(a)(1) is amended to read as follows:

**§ 25.202 Frequencies, frequency tolerance and emission limitations.**

(a)(1) Frequency band. The following frequencies are available for use by the fixed-satellite service. Precise frequencies and bandwidths of emission shall be assigned on a case-by-case basis. The Table follows:

| Space-to-Earth (GHz) | Earth-to-space (GHz) |
|---|---|

| | |
|---|---|
| 3.7-4.2[1] | 5.091-5.25[12,14] |
| 6.7-7.025[12] | 5.925-6.425[1] |
| 10.7-10.95[1,12] | 12.75-13.15[1,12] |
| 10.95-11.2[1,2,12] | 13.2125-13.25[14] |
| 11.2-11.45[1,12] | 13.75-14[4,12] |
| 11.45-11.7[1,2,12] | 14-14.2[5] |
| 11.7-12.2[3] | 14.2-14.5 |
| 12.2-12.7[13] | 15.43-15.63[12,15] |
| 18.3-18.58[1,10,16] | 17.3-17.8[9] |
| 18.58-18.8[6,10,11] | 27.5-29.5[1] |
| 18.8-19.3[7,10] | 29.5-30 |
| 19.3-19.7[8,10] | 48.2-50.2 |
| 19.7-20.2[10] | |
| 37.6-38.6 | |
| 40-41 | |

[1]This band is shared coequally with terrestnal radiocommunication services.
[2]Use of this band by geostationary satellite orbit satellite systems in the fixed-satellite service is limited to international systems; i.e., other than domestic systems.
[3]Fixed-satellite transponders may be used additionally for transmissions in the broadcasting-satellite service.
[4]This band is shared on an equal basis with the Government radiolocation service and grandfathered space stations in the Tracking and Data Relay Satellite System.
[5]In this band, stations in the radionavigation service shall operate on a secondary basis to the fixed-satellite service.
[6]The band 18.58-18.8GHz is shared co-equally with existing terrestrial radiocommunication systems until June 8,2010.
[7]The band 18.8-19.3 GHz is shared co-equally with terrestnal radiocommunications services until June 8, 2010, except for operations in the band 19.26-19.3GHz and for low power systems operating under Section 101.147(r)(10), which shall operate on a co-primary basis until October 31, 2011.
[8]The use ofthe band 19.3-19.7GHz by the fixed-satellite service (space-to-Earth) is limited to feeder links for the mobile-satellite service.
[9]The use of the band 17.3-17.8 GHz by the Fixed-Satellite Service (Earth-to-space) is limited to feeder links for the Direct Broadcast Satellite Service, and the sub-band 17.7-17.8 GHz is shared co-equally with terrestrial fixed services.
[10]This band is shared co-equally with the Federal Government fixed-satellite service.
[11]The band 18.6-18.8 GHz is shared co-equally with the non-Federal Government and Federal Government Earth exploration-satellite (passive) and space research (passive) services.
[12]Use of this band by non-geostationary satellite orbit systems in the fixed-satellite service is limited to gateway earth station operations.
[13]Use of this band by the fixed-satellite service is limited to non-geostationary satellite orbit systems.
[14] See 47 CFR 2.106, footnotes S5.444A and US344, for conditions that apply to this band.
[15] See 47 CFR 2.106, footnotes S5.511C and US359, for conditions that apply to this band.
[16] The band 18.3-18.58 GHz is shared co-equally with terrestrial radiocommunications services until November 19, 2012.

* * * * *

9. Section 25.258 is amended to read as follows:

**§ 25.258** Sharing between **NGSO MSS** Feeder links Stations and **GSO FSS** services in the **29.25-29.5 GHz** Bands.

* * * * *

(b) Licensed GSO **FSS** systems shall, to the maximum extent possible, operate with frequency/polarization selections, in the vicinity of operational or planned NGSO **MSS** feeder link earth station complexes, that **will** minimize instances of unacceptable interference to the GSO FSS space stations. Earth station licensees operating with GSO FSS systems shall be capable ofproviding earth station locations to support coordination of NGSO MSS feeder **link** stations under paragraphs (a) and (d) of this section. Operation of ubiquitously deployed GSO FSS earth stations in the 29.25-29.5 GHz frequency band shall conform to the **rules** contained in Section 25.138.

* * * * *

## PART 'IC-EXPERIMENTAL RADIO, AUXILIARY, SPECIAL BROADCAST AND OTHER PROGRAM DISTRIBUTIONAL SERVICES

10. The authonty citation for Part 74 continues to read as follows:

Authority: Secs. **4,** 303.48 Stat., as amended, 1066, 1032; 47 U.S.C. 158, 303

11. Section **74.502** of our rules is amended to read as follows:

**§ 74.502** Frequency **assignment.**

* * * * *

(c) Aural broadcast STL and intercity relay stations that were licensed or had applications pending before the Commission as **of** September 18, 1998 may continue those operations in the band 18,760-18,820 and 19,100-19,160 MHz on a shared co-primary basis with other services under parts 21, 25, and 101 ofthis chapter until June 8. 2010. Pnor to June 8, 2010, such stations are subject to relocation by licensees in the fixed-satellite service. Such relocation is subject to the provisions of §§ 101.85through 101.97 ofthis chapter. After June 8, 2010, such operations **are** not entitled to protection from fixed- satellite service operations and must **not** cause unacceptable interference to fixed-satellite service station operations. No applications for new licenses will be accepted in these bands after June 8,2000.

* * * * *

**12.** Section 74.551(d) of our rules is modified to read as follows:

**§ 74.551** Equipment **changes.**

* * * * *

(d) Permissible changes in equipment operating in the bands 18.3-18.58, 18.76-18.82 GHz and 19.1-19.16GHz. Notwithstanding other provisions of this section, licensees of stations that remain co-primary under the provisions of § 74.502(c) may not *make* modifications to their

systems that increase interference to satellite earth stations, or result in a facility that would be more costly to relocate.

* * * * *

13. Section **74.602** of our rules is amended to read as follows:

§ 74.602 Frequency assignment.

* * * * *

(g) The following frequencies are available for assignment to television STL, television relay stations and television translator relay stations. Stations operating on frequencies in the sub-bands 18.3-18.58 GHz and 19.26-19.3 GHz that were licensed or had applications pending before the Commission as of September 18, 1998 may continue those operations on a shared co-primary basis with other services under parts **21,** 25, 78, and 101 of this chapter. Such stations, however, are subject to relocation by licensees in the fixed-satellite service. Such relocation is subject **to** the provisions of §§ 101.85 through 101.97 of this chapter. No new applications for new licenses will be accepted in the 19.26-19.3 GHz band after June 8, 2000, and no new applications for new licenses will be accepted in the 18.3-18.58 GHz band after November 19, 2002. The provisions of § 74.604 do not apply to the use of these frequencies. Licensees may use either a two-way link or one or both frequencies of a frequency pair for a one-way link and shall coordinate proposed operations pursuant to procedures required in § 101.103(d) of this chapter.

* * * * *

14. Section 74.651(d) of our rules is modified to read as follows:

§ 74.551 Equipment changes.

* * * * *

(e) Permissible changes in equipment operating in the bands 18.3-18.58 GHz and 19.26-19.3 GHz. Notwithstanding other provisions of this section, licensees of stations that remain co-primary under the provisions of § 74.602(g) may not make modifications to their systems that increase interference to satellite earth stations, or result in a facility that would be more costly to relocate.

* * * * *

## PART 78—CABLE TELEMSION RELAY SERVICE

15. The authority citation for Part 78 continues to read as follows:

AUTHORITY: Secs. 4(i), 301 and 303(r), Federal Communications Act of **1934,** as amended, 47 U.S.C. 4(i), 301 and 303(r))

16. Section 78.18 of our rules is amended as follows:

§ 78.18 Frequency assignments.

(a) * * * *

**(4)** The Cable Television Relay Service is also assigned the following frequencies in the 17,700-19,700 MHz band. These frequencies are co-equally shared with stations in other services under parts 25, 74, and 101 of this chapter. Cable Television Relay Service stations operating on frequencies in the sub-bands 18.3-18.58 GHz and 19.26-19.3 GHz that were licensed or had applications pending before the Commission as of September 18, 1998 may continue those operations on a shared co-primary basis with other services under parts 25, 74, and 101 of this chapter. Such stations, however, are subject to relocation by licensees in the fixed-satellite service. Such relocation is subject to the provisions of §§ 101.85 through 101.97 of this chapter. No new applications for part 78 licenses will be accepted in the 19.26-19.3 GHz band after June 8, 2000, and no new applications for part 78 licenses will be accepted in the 18.3-18.58 GHz band after November 19, 2002.

* * * * *

17. Section 78.109 of *our* rules is amended as follows:

§ 78.109 **Equipment changes.**

* * * * *

(d) ***Permissible changes in equipment operating in the bands*** *18.3-18.58 GHz and 19.26-19.3 GHz.* Notwithstanding other provisions of this section, licensees of stations that remain co-primary under the provisions of § 78.18(a)(4) may not make modifications to their systems that increase interference to satellite earth stations, or result in a facility that would **be** more costly to relocate, unless the modifications are needed as a result of a Commission requirement..

* * * * *

**PART** 101 — FIXED **MICROWAVE SERVICES**

The authority citation for Part 101 continues to read as follows:

AUTHORITY: 47 U.S.C. 154, and 303.

18. Section 101.83 of our rules **is** amended as follows:

§ 101.83 **Modification** of **station license.**

Permissible changes in equipment operating in the band 18.3-19.3 GHz: Notwithstanding other provisions of this section, stations that remain co-primary under the provisions **of** § 101.147(r) may not make modifications to their systems that increase interference to satellite earth stations, or result in a facility that would be more costly to relocate.

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19. Section 101.85 of our rules is amended as follows:

**§ 101.85** Transition of the **18.3-19.3 GHz** band from the terrestrial fixed services to the fixed-satellite service (FSS).

Fixed services (FS) frequencies in the 18.3-19.3 GHz bands listed in §§ 21.901(e), 74.502(c), 74.602(g), and 78.18(a)(4) and § 101.147(a) and (r) of this chapter have been allocated for use by the fixed-satellite service (FSS). The rules in this section provide for a transition period during which FSS licensees may relocate existing FS licensees using these frequencies to other frequency bands, media or facilities.

(a) FSS licensees may negotiate with FS licensees authorized to use frequencies in the 18.3-19.30 GHz bands for the purpose of agreeing to terms under which the FS licensees would:

(1) Relocate their operations to other frequency bands, media or facilities; or alternatively

(2) Accept a sharing arrangement with the FSS licensee that may result in an otherwise impermissible level of interference to the FSS operations.

(b)(1) FS operations in the 18.3-18.58 GHz band that remain co-primary under the provisions of §§ 21.901(e), 74.502(c), 74.602(d), 78.18(a)(4) and § 101.147(r) of this chapter will continue to be co-primary with the FSS users of this spechum until November 19, 2012 or until the relocation of the fixed service operations, whichever occurs sooner.

(2) FS operations in the 18.58-19.3 GHz band that remain co-primary under the provisions of §§ 21.901(e), 74.502(c), 74.602(d), 78.18(a)(4) and § 101.147(r) of this chapter will continue to be co-primary with the FSS users of this spectrum until June 8, 2010 or until the relocation of the fixed service operations, whichever occurs sooner, except for operations in the band 19.26-19.3 GHz and low power systems operating pursuant to § 101.47(r)(10), which shall operate on a co-primary basis until October 31, 2011.

**(3)** If no agreement is reached during the negotiations pursuant to § 101.85(a), an FSS licensee may initiate relocation procedures. Under the relocation procedures, the incumbent is required to relocate, provided that the FSS licensee meets the conditions of § 101.91.

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**20.** Section 101.147(r) is amended to read as follows:

**§ 101.147** Frequency assignments

* * * * *

(r) *17,700 to 19.700 and 24,250 to 25,250 MHz*: Operation of stations using frequencies in these bands is permitted to the extent specified below.

(i) Until November 19, 2012, stations operating in the band 18.3-18.58 GHz that were licensed or had applications pending before the Commission as of November 19, 2002 shall operate on a shared co-primary basis with other services under Parts 21, 25, and 74 of the Commission's rules;

(ii) Until October 31, 2011, operations in the band 19.26-19.3 GHz and low power systems operating pursuant to section 101.47(r)(10) shall operate on a co-primary basis;

(iii) Until June 8, 2010, stations operating in the band 18.58-18.8 GHz that were licensed or had applications pending before the Commission as of June 8, 2000 may continue those operations on a shared co-primary basis with other services under Parts 21, 25, and 74 of the Commission's rules;

(iv) Until June 8, 2010, stations operating in the band 18.8-19.3 GHz that were licensed or had applications pending before the Commission as of September 18, 1998 may continue those

operations on a shared co-primary basis with other services under Parts 21, 25, and 74 of the Commission's rules;

(v) After November 19,2012, stations operating in the band 18.3-18.58 GHz are not entitled to protection from fixed-satellite service operations and must not cause unacceptable interference to fixed-satellite service station operations.

(vi) **After** June 8,2010, operations in the 18.58-19.30 GHz band are not entitled **to** protection from fixed-satellite service operations and must not cause unacceptable interference to fixed-satellite service station operations.

(vii) After November 19,2002, no new applications for Part 101 licenses will be accepted in the 18.3-18.58 GHz band.

(viii) After June 8, 2000, no new applications for Part 101 licenses will be accepted in the 18.58-19.3 GHz band.

(ix) Licensees may use either a two-way link or one frequency of a frequency pair for a one-way link and must coordinate proposed operations pursuant to the procedures required in Sec. 101.103. (Note, however, that stations authorized as of September 9, 1983, to use frequencies in the band 17.7-19.7 GHz may, upon proper application, continue to be authorized for such operations, consistent with the above conditions related to the 18.58-19.3 GHz band.)

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## APPENDIX B:
## FINAL REGULATORY FLEXIBILITY ANALYSIS

1. As required by the Regulatory Flexibility Act (RFA),[111] an Initial Regulatory Flexibility Analysis (IRFA) of the possible significant economic impact on small entities was incorporated in the 18 *GHz Notice*.[112] The Commission sought written public comments on the proposals in the ***18 GHz Notice***, including comment on the **IRFA.** In its ***18 GHz Order,*** the Commission concluded that the rules adopted in that Order would not, under the **RFA,** affect small entities disproportionately.[113] Many of **the** rules adopted in the ***18 GHz Order*** pertained to entities, such as licensees of geostationary and non-geostationary space stations, which, because of their size, do not qualify as small entities. While a few of the rules adopted concerned terrestnal facilities, such as microwave services, which qualify as small entities because **of** their size, the Commission concluded that "procedures do not affect small entities disproportionately and it is likely no additional outside professional skills are required to complete the annual report indicating the number of small antenna earth stations actually brought into service."[114] We received no petitions for reconsideration of that Final Regulatory Flexibility Analysis.

**2.** Subsequently, the Commission addressed issues unrelated to its RFA analysis in its ***First Order on Reconsiderufion.*** The ***Firsf Order on Reconsiderarim*** altered several previously adopted tules, including changing the power flux density value for the 18.3-18.8GHz frequency band and extending the same ten-year comparable facilities relocation policy to all FS operations in the 18GHz band. The ***First Order on Reconsiderufion*** also decided no longer to require the use of the Legacy List coordination process. Finally, the Commission considered the impact **of** it rule changes on small entities and concluded that the rules adopted would not, under the RFA, affect small entities disproportionately.[115]

**3.** In this ***Second Order on Reconsideration,*** we address issues unrelated to earlier RFA analysis and promulgate additional final tules. This additional Final Regulatory Flexibility Analysis (FRFA) conforms to the **RFA.**[116]

A. **Need for.** and Objectives **of,** the Rules

**4.** This ***Second Order on Reconsiderufion*** grants, in part, a Petition for Reconsideration filed ***in*** this proceeding by the **Hughes** Electronics Corporation (Hughes). This Order also denies a Petition for Reconsideration filed by the Satellite Industry Association (SIA) filed against the ***First Order on Reconsideralion."***[117] In response to the ***Hughes Reconsideration Petition,*** **the** Commission alters **the** 18

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[111] ***See*** 5 U.S.C. § 603. **The** RFA, ***see,*** 5 U.S.C. § **601** ***et seq.***, has been amended **by** the Contract With America Advancement **Act** of 1996, **Pub.** L. No. 104-121, 110 Stat. 847 **(1996)** (CWAAA). Title II of the CWAAA **is** the **Small Business** Regulatory Enforcement Fairness Act of **1996** (SBREFA).

[112] ***See Reallocarion of the 17 7-19 7 GHz Frequency Band, Blanket Licensing of Satellite Earfh Stations in the 17.7-20 2 GHz and 27 5-30 0 GHz Frequency Bands, and the Allocation of Addirional Spectrum in fhe 17.3-17.8 GHz and 24.75-25.25 GHz Frequency Bands for Broadcast Sofellire-Service Use,*** Notice **of** Proposed Rulemaking, IB Docket No. 98-172, 13 FCC Rcd **19923** (1998) (*18 GHz Notice*).

[113] 5 U.S.C. § 605(b); *see* ***18 GHz Order,*** 15 FCC Rcd at 13514

[114] *18 GHz Order*, 15 FCC Rcd at 13514

[115] 5 U.S.C. § 605(b); ***see First Order on Reconsiderarion.*** 16 FCC Rcd at **19855.**

[116] 5 U.S.C. § 604,

[117] ***See*** Hughes Electronics Corp., ***Petition for Partial Reconsideration,*** IB Docket No. **98-172, RM-9005, RM-9118** (tiled, Oct. 6, 2000) ***(Hughes Reconsideration Petition), available at*** < http://gullfoss2.fcc.gov/prod/ecfs/

(continued...)

GHz band plan to make the fixed-satellite service **(FSS)** the sole primary spectrum allocation in the 18.3-18.58 GHz band. The Commission's actions recognize the Increased number of frequency spectrum options that the Commission has recently made available to licensees in the terrestrial fixed service **(FS),** the other primary service currently located in the 18.3-18.58 GHz band."' The Commission also allows the blanket licensing of GSO FSS facilities in the 18.3-18.58GHz band and 29.25-29.5 GHz bands and – consistent with the band clearing procedures that we have adopted in other portions of the frequency spectrum– the Commission adopts provisions designed to ensure the orderly migration and timely reimbursement **of** terrestrial FS incumbents in the 18.3-18.58 GHz band. These changes to the Commission's rules will help promote the efficient use of spectrum for existing and future users.

### B. Summary of Significant Issues Raised by Public Comments in Response to the IRFA

5. No comments were submitted in direct response to the **IRFA.**

### C. Description and Estimate of the Number of Small Entities To Which the Rules Will Apply

*6.* The RFA directs agencies to provide a description of and, where feasible, an estimate of the number of small entities that may be affected by the adopted rules."' The RFA generally defines the term "small entity" as having the same meaning as the terms "small business," "small organization," and "small governmental jurisdiction."[120] In addition, the term "small business" has the same meaning as the term "small business concern" under the **Small** Business Act."' **A** small business concern is one which: (1) is independently owned and operated; (2) is not dominant in its field of operation; and **(3)** satisfies any additional criteria established by the Small Business Administration (SBA).[122] A small organization is generally "any not-for- profit enterprise which is independently owned and operated and is not dominant in its field."[123] Nationwide, as of 1992, there were approximately 275,801 small organizations.[124] "Small

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retrieve.cgi?native or pdf=pdf&id document=651 1958976 >; Satellite Industry Association, ***Petition for Reconsideration,*** IB Docket No. 98-172 (filed Jan. 7, 2002) ***(SIA Reconsiderafion Petition), available at*** <http://gullfoss2.fcc. gov/prod/ecfs/retrieve.cgi?native or pdf=pdf&id document=65 **129** 77790>. The SIA is a national trade association that represents **U.S.** satellite manufacturers, service providers and launch-service companies. *SIA Reconsideration Petition* at 1.

[118] ***Reallocation*** *of the 17.7-19.7 GHz* ***Frequency Band, Blanket Licensing*** *of Satellite Earth Stations in the 17.7-20.2 GHz and 27.5-30.0 GHz* ***Frequency Bands, and the Allocation of Additional Spectrum in the 17.3-17.8 GHz and 24.75-25.25 GHz Frequency Bands for Broadcast Satellite-Service Use,*** Report and Order, IB Docket No. 98-172, 15 FCC Rcd 13.430 (2000) ***(18 GHz Order), aff'd sub nom. Teledesic, LLC v. FCC,*** 275 F.3d 75 (D.C. Cir. 2001). Typical terrestrial FS in the 18 GHz band include point-to-point microwave communications, Cable Television Relay Service (CARS), auxiliary broadcasting and electronic newsgathering **(ENG)** activities.

[119] 5 U.S.C. § 603(b)(3).

[120] *Id.* § 601(6).

[121] 5 **U.S.C.** § 601(3) (incorporating by reference the definition of "**small** business concern" in **15** U.S.C. § 632). Pursuant to the RFA, the statutory definition of a small business applies "unless an agency, after consultation with the Office of Advocacy of the Small Business Administration and after the opportunity for public comment, establishes one **or** more definitions of such term which are appropriate to the activities **of** the agency and publishes such definition(s) in the Federal Register." 5 **U.S.C.** § 601(3).

[122] Small Business Act, **15** U.S.C. § 632 (1996).

[123] **5** U.S.C. § 601(4).

governmental jurisdiction" generally means "governments of cities, counties, towns, townships, villages, school districts, or special districts, with a population of less than 50,000."[125] As of 1992, there were approximately 85,006 such jurisdictions in the United States.[126] This number includes 38,978 counties, cities, and towns; of these, 37,566, or 96 percent, have populations of fewer than 50,000.[127] The Census Bureau estimates that this ratio is approximately accurate for all governmental entities. Thus, of the 85,006 governmental entities, we estimate that 81,600 (91 percent) are small entities. Below, we further describe and estimate the number of **small** entity licensees that may be affected by the adopted rules.

***Satellite Telecommunications.*** The SBA has developed a small business size standard for Satellite Telecommunications Carriers, which consists of all such companies having $12.5 million or less in annual receipts.'" In addition, a second SBA size standard for Other Telecommunications includes "facilities operationally connected with one or more terrestnal communications systems and capable of transmitting telecommunications to or receiving telecommunications from satellite systems,"[129] and also has a size standard of annual receipts of $12.5 million or less. According to Census Bureau data for 1997, there were 324 firms in the category Satellite Telecommunications, total, that operated for the entire year.[130] Of this total, 273 firms had annual receipts of $5 million to $9,999,999 and an additional 24 firms had annual receipts of $10 million to $24,999,990.[131] Thus, under this size standard, the majority of firms can be considered small. In addition, according to Census Bureau data for 1997, there were 439 **firms** in the category Satellite Telecommunications, total, that operated for the entire year.[132] Of this total, 424 firms had annual receipts of $5 million to $9,999,999 and an additional **6** firms had annual receipts of $10 million to $24,999,990.[133] Thus, under this second size standard, the majority of firms can be considered small.

***Space Starions (Geostationary).*** Commission records reveal that there are 15 space station licensees. We do not request nor collect annual revenue information, and thus are unable to estimate of the number of geostationary space stations that would constitute a small business under the SBA definition, or apply any rules providing special consideration for Space Station (Geostationary) licensees that are **small** businesses.

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[124] **1992** Economic Census, U.S. Bureau of the Census, Table 6 (special tabulation of data **under** contract to Office of Advocacy of the U.S. Small Business Administration).

[125] 5 **U.S.C.** § 601(5).

[126] U.S. Dept. of Commerce, Bureau of the Census, ***1992 Census*** of ***Governments.***

[127] ***Id***

[128] ***13*** C.F. R. § 121.201, North American Industry Classification System (NAICS) code 517410 (formerly 5 13340).

[129] Id. NAICS code 517910 (formerly 513390)

[130] U.S. Census Bureau, 1997 Economic Census, Subject Series: Information, "Receipt Size of Firms Subject to Federal Income Tax: 1997," Table **4,** NAICS code 517410 (issued Oct. 2000).

[131] *Id.*

[132] U.S. Census Bureau, 1997 Economic Census, Subject Series: Information, "Receipt Size of Firms Subject to Federal Income Tax: 1997," Table 4, NAICS code 517910 (issued Oct. 2000).

[133] ***Id.***

***Fired Satellite Transmit/Receive Earth Stations.*** Currently there are 10 operational fixed-satellite transmit/receive earth stations authorized for use in the 18.3-18.58 GHz and 29.25-29.5 GHz bands. We do not request or collect annual revenue information, and thus are unable to estimate the number of earth stations that would constitute a small business under the **SBA** definition.

***Broadcast Auxiliary Service.*** (BAS) involves a variety of transmitters, generally used to relay broadcast programming to the public (through translator and booster stations) or within the program distnbution chain (from a remote news gathering unit back to the stations). The Commission has not developed a definition of small entities specific to broadcast auxiliary licensees. The U.S. Small Business Administration (SBA) has developed small business size standards, as follows: 1) For TV BAS, we will use the size standard for Television Broadcasting, which consists of all such companies having annual receipts of no more than $12.0 million;[134] 2) For Aural **BAS,** we will use the size standard **for** Radio Stations, which consists of all such companies having annual receipts of no more than $6 million;[135] 3) For Remote Pickup **BAS** we will use the small business size standard for Television Broadcasting when used by a TV station and that for Radio Stations when used by such a station.

According to Census Bureau data for 1997, there were 906 Television Broadcasting firms, total that operated for the entire year.[136] Of this total, 734 firms had annual receipts of $9,999,999.00 or less and an additional 71 had receipts of $10 million to $24,999,999.00."' Thus, under this standard, the majority of firms can be considered small.

According to Census Bureau data for 1997, there were 4,476 Radio Stations (firms), total, that operated for the entire year.[138] Of this total 4,265 had annual receipts of $4,999,999.00 or less, and an additional 103 firms had receipts of $5 million to $9,999,999.00.[139] Thus, under this standard, the great majority of firms can be considered small.

***Fixed Microwave Services.*** (FS) includes common carrier, private-operational fixed, and broadcast auxiliary radio services, Presently there are approximately 22,015 common carrier fixed licensees and 61,670 private operational-fixed licensees and broadcast auxiliary radio licensees in **the** microwave services. The **SBA** has developed a small business size standard for Cellular and other Wireless Telecommunications, which consists of all such companies having 1,500 or fewer employees."' According to Census Bureau data for 1997, there were 977 firms in this category, total, that operated for the entire year.'" Of this total, 965 firms had employment of 999 or fewer employees, and an additional 12 had employment of 1,000 employees or more.[142] Thus, under this standard, virtually all **firms** can be

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[134] 13C.F.R. § 121.201, NAICS code 513120.

[135] *Id.* at NAICS code 513112

[136] U.S. Census Bureau, 1997 Economic Census, Subject Series: Information, "Receipts Size *of* **Firms** Subject lo Federal Income Tax: 1997," Table **4,** NAICS code 513120 (issued Oct. **2000).**

[137] *Id* The census data do not provide a more precise estimate.

[138] */d.* At NAICS code 513112..

[139] *Id.* The census data do not provide a more precise estimate

[140] 13 CFR 121.201, NAICS code 513322.

[141] U.S. Census Bureau, 1997 Economic Census, Subject Series: Information. "Employment Size *of* Firms Subject to Federal Income Tax: 1997," Table **5, NAICS** code **5** 13310 (issued Oct. **2000).**

[142] *Id.* The census data do not provide a more precise estimate *of* the number **of** firms that have employment of **1,500** or fewer employees; the largest category provided is "Firms with 1,000 employees or more."

considered small. Microwave services in the 18.3-18.58 GHz band include point-to-pomt Private Cable Operator (PCO) systems, Cable Television Relay Systems and common carrier systems. Private point-to-point PCO systems use ninety-eight percent of the operational channels in the band; Cable Television Relay Systems less than two percent of the operational channels; and common carrier systems use less than one percent of the operational channels in the band.

### D. Description of Projected Reporting, Recordkeepiog, and Other Compliance Requirements

7. The rules adopted in this ***Second Order on Reconsiderafion*** involve no reporting requirements, and it is likely no additional outside professional skills will be necessary to comply with the rules and requirements here listed.

### E. Steps Taken to Minimize significant Economic Impact on Small Entities, and Significant Alternatives Considered

8. The RFA requires an agency to describe any significant alternatives that it has considered in reaching its proposed approach, which may include the following four alternatives (among others): (1) the establishment of differing compliance or reporting requirements or timetables that **take** into account the resources available to small entities; **(2)** the clarification, consolidation, or simplification of compliance or reporting requirements under the rule for small entities; (3) the use of performance, rather than design, standards; and **(4)** an exemption from coverage of the rule, or any part thereof, for **small** entities.[143] The decisions of this ***Second Order on Reconsideration*** should positively affect both large and small businesses by providing a faster, more efficient, and less economically burdensome coordination and licensing procedure.

### F. Report to Congress

**9.** The Commission will send a copy of this ***Second Order on Reconsiderufion,*** including this **FRFA,** in a report to be sent to Congress pursuant to the Congressional Review Act, ***see*** 5 **U.S.C.§** 801 (a)(1)(A). In addition, the Commission will send a copy of the ***Second Order on Reconsiderafion,*** including this FRFA, to the Chief Counsel for Advocacy of the Small Business Administration. **A** copy of this ***Second Order on Reconsideration*** and FRFA (or summaries thereof) will also be published in the Federal Register.[144]

[143] 5 **U.S.C.§** 603(c).

[144] ***See*** 5 U.S.C. § 604(b).